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THE

VETERINARIAN,

FOR 1828.

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VOL. I.

Ars Veterinaria post medicinam secunda est.—*Vegetius.*

LONDON:

Printed by Compton and Ritchie, Middle Street, Cloth Fair;

PUBLISHED BY LONGMAN, REES, ORME, BROWN, & GREEN,

PATERNOSTER ROW.

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A LIST

OF

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AND AUTHORS FROM WHOSE WORKS EXTRACTS OR TRANSLATIONS HAVE BEEN MADE.

[*Those in italics are original Contributors.*]

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THE VETERINARIAN.

VOL. I. JANUARY, 1828. No. 1.

VETERINARY PERIODICAL PUBLICATIONS.

IN introducing a Veterinary Periodical Publication to the notice of the Public, to pretend to offer anything by way of apology or explanation for its appearance, which custom or courtesy may have prompted on any similar occasion, appears to us to be so supererogatory on the present, that we do not hesitate to pronounce it to be one of the most important steps to advancement that have been taken in Veterinary Science, even since the foundation of the College. We have only to cast a "retrospective eye" over the arts and sciences in general to convince ourselves how much we are indebted for the present unrivalled state of them in this country to a periodical press; indeed, were we to take a comparative and more particular survey of them, we might probably discover that their respective rises into importance bore some sort of relation to their ephemeral publications, as it indisputably does much to their public institutions. For, in such ways are men excited to mental exertion—an emulative spirit is diffused among them, eliciting from their minds more or less useful information, that would perhaps have lain for ever dormant, or have at some remote period presented itself in too obscure a form to have rendered the reminiscence of much value. The individual literary productions of the members of a profession, must, in respect to general utility, be regarded as inferior to periodical works;—because one is occasional and more or less limited in its subjects,

the other continued and (in its own department of science) unrestricted; because the one soon after its appearance is more or less completely embraced by the other; and because the former is solely dependent upon the labour and talent of one or two persons, whereas the periodical is mostly the product of the contributions of many: at least, these strike us at the moment to be the principal reasons.

Could anything be urged against what we have just written on the utility and advantages of periodical literature, much less any instance to the contrary be adduced against us, possibly it might strike some that even the Veterinary Art itself afforded one! Would that it did—would that the science in this, the thirty-seventh year of the foundation of the College, evinced proofs of it—would that the Members of the Profession could rise up and declare it. "Well! but, granting all this, (some one seems to reply) how comes it, since you appear to convince one of its paramount utility, that the Veterinary Art has not had this aid?" Ask our Professor, Mr. Coleman; or, should his interpretation be unsatisfactory, step over the way and put the question to his Assistant, Mr. Sewell: in case however the inquiry should be unsuccessful in that quarter also, we will in the mean time relate what we know about the affair.

In compliance with the sixteenth of the "REGULATIONS FOR THE VETERINARY COLLEGE," published in 1793, which is this—"*A Volume of the Transactions of the College and School* SHALL BE PUBLISHED ANNUALLY, *and delivered to each Subscriber or his order, at the College,* GRATIS"—in the year of our Lord 1801, made its appearance "THE FIRST NUMBER OF VETERINARY TRANSACTIONS; CONTAINING OBSERVATIONS ON THE EFFECTS AND TREATMENT OF WOUNDS OF JOINTS AND OTHER CIRCUMSCRIBED CAVITIES;" strange to relate, however, instead of being continued "annually" as the Regulation directs, the *second* number has not up to this present moment been seen or even heard of: a breach of orders we feel quite incompetent to put in any vindication for, unless we adopt Mr. Blaine's solution of the mys-

tery—" that nothing has since occurred to merit note, or that the *modesty* of the *learned* Professor prevents him from obtruding on the public an account of his *additional discoveries!*" Inadmissible and untrue as this invention of Mr. Blaine's obviously is, (we might say, was intended to show itself to be,) it is surpassed in both these respects by the one set forth by the writer of the "PREFACE" to the "TRANSACTIONS." He says, at page 26, "The general meeting of the College having thought it necessary to publish *annually* a few of the most remarkable cases which occur in practice, *to be given to Subscribers,* the Professor is now called on to comply with their order. They, however, who suppose him competent to furnish new matter well digested and worthy of public attention, *once in the year,* OVER-RATE HIS ABILITIES!!" If the writer had told us that the Professor's time was so much occupied in various ways in his new appointment that he could not conveniently devote any part of it to writing for the first year or two, credence might possibly have been, *in mercy,* bestowed upon it; but to assert that the Professor's abilities were unequal to the task of composing forty octavo pages of double-leaded English, within the space of three hundred and sixty-five days, was to reflect very little credit back upon the "General Meeting" for having elected such a Professor, and certainly to give the Subscribers credit for much more capacious throats than we should imagine those gentlemen could have possessed even in 1801.

From the French Veterinary School at Alfort (close to Paris) no less than *two* Journals, either of them equal in magnitude to the "*Transactions,*" issue *every month!* The one embracing Veterinary and Comparative Medicine in general; the other limiting its inquiries to Sporadic and Epidemic Diseases and their Therapeutics: and of these we purpose to extract and translate such parts as may appear useful or interesting to the Profession.

Seeing all this, then, it is very natural that Veterinary Surgeons and others should (as they have long and often done) ex-

press their surprise that such a work as the present has not been undertaken years ago, and that so much apparent apathy on the subject should continue to reign in our capital: it was this murmuring that first drew our attention to the desideratum, now, some considerable time since, we having delayed our *début* in expectation that some abler scribe might be found, and one who had advantages which we confessedly stand in need but in doubt of obtaining, *viz.* the patronage for the work of the Veterinary College. So that we are ready to reproach even ourselves for not making our appearance earlier; however, as

Sera nunquam est ad bonos mores via,

so we trust, that, though late in the field, we shall not appear unwelcomed, or carry on our operations unsupported; and we rely the more on receiving support, because we pledge ourselves, now that we are upon the ground, to make every amends in our power for the lateness of our arrival.

Human medicine and chemistry have both undergone such a revolution within this last half century that works written thirty years ago are of comparative little value at the present day; unless they be of the class of the "*Transactions*," which, from the circumstance of only one number having been published, and that now seven and twenty years since, becomes scarce, and therefore curious, and in the same ratio valuable: considerations that induce us here to make some extracts from it, the work itself remaining probably in the hands of very few. After insisting on the indispensableness of an acquaintance with the mechanism and economy of the animal, "in order to understand and improve the veterinary art," the editor says, in his preface,

"The object of the institution of the Veterinary College, is not merely that the veterinary art be studied, and in time improved as much as possible, but to teach and *diffuse* whatever information may be acquired in the course of a *gradual progression* towards perfection."

Gradual progression, indeed! Yes, *gradually* enough, God

knows, we have progressed: so gradually, that, were the lectures given at the present day at the College compared with those delivered twenty years ago, we verily believe that the result of the comparison would incline us to conclude we were gradually *retro*-gressing instead of gradually *pro*-gressing.—But, to proceed with our extracts—Next follows a string of remarks, some of them pertinent and proper enough, which appears to have been woven to repel some opposition the College at that day had to contend with, and at the same time to reply to certain complaints of some of the Subscribers, which had originated in the misrepresentations and falsehoods of their grooms, whose interest then, as it is at the present day, was evidently anti-collegial. The two concluding paragraphs are to our purpose; we shall therefore transcribe them. The first of these commences with two sentences we have already quoted, about over-rating the Professor's abilities, and thus continues—

"The Institution is still in its infancy; and, although the Public in general, and the Subscribers to the Veterinary College in particular, *have a right* to expect *some* improvements in the Veterinary Art, yet the necessity of *sober and long-continued investigation*, before the truth of almost any opinion can be established, must be admitted. To ascertain the best remedies for any disease, requires *numerous experiments*, *much observation*, and *long experience*. Without these precautions, hasty conclusions and false opinions may be formed from new facts, which future investigation may contradict. It is therefore wished to be understood, that, although observations will be always offered with more or less confidence, as he is convinced of their truth; yet, in many instances, *longer experience* and *more minute inquiry* may hereafter set aside favourite opinions. Nevertheless, even such a failure will be attended with some advantages to the public."

Whether this was intended to pave the way for any errors the Professor might be led into, or, as a coat of varnish, to make the Public believe that he was achieving great deeds in producing a number of the "*Transactions*" annually, it is not worth our while to stop to inquire: our interpretation of the homonymy is this—That, although the College was "in infancy" the Public had *a right* to expect something from it; but that this right

could not be with reason or justice enforced, because "sober and long-continued investigation," "numerous experiments," "much observation," and "long experience" were so many obstacles in the way of the infant's learning to talk; and that whatever it might say when it did speak, was to be received as inconclusive because "longer experience and more minute inquiry" might contradict it. But, the climax of this paragraph is, that, after the wily and learned writer had directed his pen with all imaginable subtlety to guard the Public from forming expectations and calculating upon the Professor's ability and industry, he concludes by saying, *that some advantages are obtainable even from erroneous opinions*: so that, after all, he has not furnished his hero with any excuse for not continuing the "*Transactions*," be they orthodox or be they not. Now then for the finale of this in-and-out preface—

"The *first* number of this Work will be *small* in consequence of the Professor's time being much occupied with a larger Work, on the *internal* Mechanism of the Foot of the Horse. The cases *he* has selected, and the observations *he* has made on the Nature and Treatment of these Cases, are chiefly confined to the Wounds of Joints and other Circumscribed Cavities. Such accidents are very frequent, and the common modes of treatment often fail. Neither are the best remedies for the same diseases in the human subject commonly successful in horses."

So ends the Preface; *finis coronat opus;* at another time we will look over the "Observations on Wounds of Circumscribed Cavities," and the cases given in illustration: the "larger work" will form a cud for future rumination. At present, let us pause a moment to contemplate the fearful chasm in the annals of veterinary medicine—the long and dark and dreary interval between the publication of the single number of the "*Transactions*" and the First of the "*Veterinarian*"—an interval of seven and twenty years—almost a professional lifetime! It is true some luminaries have made their appearance in the professional horizon in the course of this darkened period; but they have been too few and too far apart to afford a steady and

constant light to the traveller seeking information in this uncultivated province of science. For want of talent or education; means or opportunity; zeal or industry; or from the sacrifice of every qualification and facility for something more substantial than professional reputation, have our fields of science, though fertile in themselves, remained so unproductive. The Art might, at least, by this time have been placed upon a sure and firm basis—Anatomy might have been fully and correctly learnt and taught—Physiology might have been much advanced—Pathology must have kept pace. With all which, the Profession, as well as the Art, might have gained much—some of its Members might have occupied very different stations, and all might have had other relations to society in general than they have at present: but it is impossible to say what might have resulted; and it can only give rise to feelings of dissatisfaction mingled with pain to turn the mind into such a train of reflections.

The deficiencies in the annals of Veterinary Literature have determined us to turn our attention to what is past, while we note the transactions of the present day; and we shall enter upon this retrograde inquiry not only in expectation of bringing to light much valuable matter now reposited in the private records of individuals, or only known within their circle of professional acquaintance, but in hopes of reviving impressions the elapse of time may have rendered faint in their minds, and even of rescuing some that may be hurrying into irretrievable oblivion. This retrospect will enable us also to look into the works of such writers as have acquired more or less reputation in the annals of farriery; in certain of which, though they be seldom mentioned in our days, we shall find much well deserving revision. The old continental writers will also come in for their share of attention.

There is one consideration in particular which the educated Veterinarian ought never to banish from his thoughts; and that is, that he never can succeed as a practitioner unless he possess a certain quantum of what is vulgarly, but impro-

perly, denominated *horse-knowledge:* he must acquire the skill and tact—see and feel with the eye and hand—of a horse-man (not a *horseman,* that is quite another thing) before he can be regarded as duly qualified to practice what he may have learnt at College, providing he was not in possession of such knowledge, which some are, before he entered there. This universally acknowledged useful, nay, indispensable qualification, might very well form, (as it obviously is) a part of the pupil's professional education; and as such ought to be taught at the College; if not by the Professor or his Assistant, why let it be assigned over to the Head-groom: it is indispensably necessary to a safe and successful practice, and there can require no other or better argument for its adoption. It is our intention at all times to blend the subject with medicine in these pages, when they can be rendered reciprocally elucidative of each other; and, we humbly submit, with the greatest advantages: on which account, coupled with the desire to render this work generally useful, we shall divest the medical matter as much as possible of technical terms, and give our prescriptions and recipes for disease in English, instead of Latin.

It is to be hoped that this Journal will infuse a spirit of laudable zeal and emulation into the minds of the junior members and students of the Profession, and that it may have some influence in rekindling sparks of such nature (should they not all be extinct) in the breasts of those appointed to illumine and direct them in the acquirement of that art by which they have got to live and to maintain a reputation as men of science. We yearly observe, with disappointment and sorrow, the same insufficient and unsatisfactory courses of instruction obstinately persisted in; we daily meet with Members of the College whom, we verily believe, would hardly be recognised even at St. Pancras; we converse with no reflecting Veterinary Surgeon, who has ever directed his thoughts to the subject, without coming at last to one lamentable conclusion; and yet, we are told, and expected to rest quiet with "the flattering unction," that the Profession is in an *eminently flourishing condition!* Pray how

does this tally with the production of ONE number of the "*Transactions*" *in the course of seven and twenty years?* or how does it accord with—"They who suppose him (the Professor) competent to furnish new matter well digested and worthy of public attention, *once in the year*, over-rate his abilities?" How true it is, we will take an early opportunity of presenting our readers with a faithful picture to show, in order that they may look and gaze with astonishment at the eminently flourishing state of the Veterinary Profession!!!

Extracts from Foreign Journals.

OBSERVATIONS ON THE INTRODUCTION OF THE ORIENTAL BLOOD OF HORSES INTO EUROPE.

HIS Majesty the King of Wurtemberg has honoured the Director of the Royal Veterinary School at Alfort with the present of a collection of lithographs, of great value from the beauty and correctness of their execution, of six horses and mares of the oriental race, reared in his Majesty's studs. A very summary description of the animals accompanies the plates, which is preceded by the observations we are about to transcribe, from the pen of the Count Brewauski.

The first European countries into which the oriental blood was introduced are Greece and Spain, whence it might have spread to the south and west of our part of the world.

It was brought into Greece, in part by the wars that country sustained against the Persians, and in part through its different points of contact with the Eastern nations. The army of Xerxes, according to Herodotus, reckoned forty thousand horses, without doubt all entire, since even in our days castration is not customary in the east, nor yet in Barbary, nor a part of Spain: the dry pasturage and warm climate of Greece favouring the effects of so advantageous a cross.

From Mauritania (Morocco) and Numidia (Algiers) the oriental blood entered Spain; also Sicily, which for several ages

was under the dominion of the Carthagenians: the horses from the coast of Barbary, from Lybia as far as the western rivers of ancient Mauritania, deriving their origin from Arabia, Persia, &c. must in course have been such as they are at present, clever, sprightly, full of animation and impetuosity.

The blood of the Scythian horses, mixing with that of the Sarmatians and other nations more westward, must of necessity have diffused itself over all the north of Europe; although two paramount causes operated against the amelioration of the indigenous breeds: one, according to Strabo, is the usage among the Scythians of castration, in order to render their horses more tractable, leaving in course a less number of stallions; the second is, that these horses transported into the moist and fertile pasturages of Lithuania, Pomerania, Germany, Switzerland, and the northern coasts of Gaul, at length degenerated themselves.

Ancient Scythia, situated towards Imaus, from its elevation and dryness and a soil of loam upon a bed of granite, possesses pasturages as salubrious as those of Arabia; but the herbage, influenced by the coldness of the climate, is not equally luxuriant and fragrant. The horses reared in those regions occupied by the Bashkirs, the Kirguses, the Bochars, &c. have, it is true, like those of the interior of Asia, the thin, veined, characteristic skin, and are clean-legged; but they have no such shaped head, such knit limb, such fineness of mane and tail, such elegance and beauty of form, such grace and gaity as the oriental horses; and the hoof is rather heavy than light: still, they possess qualities that render them highly valuable for warfare; they are indefatigable, hardy, requiring but little care, gentle, long-winded, strong and enduring. These animals, in common with the indigenous Asiatic horses, have something particular in their manner of looking, a sort of grimace, as it were, laying down their ears and biting, pawing and kicking: characteristics possessed by no western horses, with the exception of the English, and they are full of Arabian blood, as any experienced observer of the Eastern race will readily perceive.

The horses of Europe, prior to any communication with the East, could not have been worth much; being of Asiatic origin, they must have owed their degeneration, both in blood and form, to poor pasturage and a humid climate. The horses of the south of Poland were probably superior to the others, having better and drier pasturages; but even these were nowise remarkable for beauty of form.

What goes to show the inferiority of the European breeds is what Polybius says respecting the passage of the Trebia by

Annibal, where he describes the heaviness of the Roman cavalry, and the manifest superiority of the Numidian, displayed in their light and rapid manœuvre: the horse of Marcus Aurelius, in the Roman bas-reliefs, formed after the low and indigenous model, has nothing characteristic of the race, the fire, the elegant and vigorous make of the oriental horses. What Pliny says about this animal in his natural history is not worth repeating; he had no idea of the beauty of the Eastern race.

From all this it is easy to draw the conclusion, that in the south the cross with the oriental breed has done more for European horses than in the north.

We recall the following events as so many antecedent epochs relating to the crossing of the indigenous breeds with the Asiatic.

The migration of the Goths, who over-run Europe in different directions as far as Spain. As a consequence of this immense accession to the population, horses, even from the north of Asia, where they are the same in kind as the Scythian, were spread over Europe: this, however, would improve the blood only, not the form; for such a cross availed nothing in countries with marshy pasturages; and in such as are dry it was only productive of cleanness of make. This epoch also forms the date of the introduction of the common sort of horses from the south of Poland into Hungary and Transylvania; in which latter country they throve best in consequence of the salubrity of the pasture. The invasion of the Moors in 710 introduced the oriental blood into Spain; where a continuance during eight centuries afforded it every opportunity for propagation; and besides, the elevated and dry pasturages of Andalusia were well suited to preserve the purity and form of such a race: the magnificence of the Saracen prince, the galantry of the courts of Grenada and Cordovia, the carousals of the grandees, became additional motives for the transportation of the most admired horses into Spain. In the tenth century we behold the grand vizier offering to the calif, among other valuable presents, fifteen Arabian horses. By the Moors were also introduced into Europe the first Arabian stallions.

In 732, the Saracens, to the number of two hundred thousand, made incursions even to the walls of Poitiers. Charles Martel completely repulsed them: their general Abd-el Rahman was killed. Thus routed they unavoidably left behind them great numbers of their horses. So that this appears to be the epoch when the French breeds first derived any advantages from crossing. Under the dominion of Napoleon, France has imported upwards of two hundred Arabian stallions!

The Crusades also established a communication with the East for a considerable time. Christian princes occupied the thrones of Jerusalem, Nicea, and Chypri; the first families of France, England, and Germany, even kings themselves, flocked to these holy wars.

The invasions of the conqueror Tsengiskan, from the circumstance of his dragging after him the armies of every people he had subdued, were attended with the transplantation and general mingling of the Asiatic breeds: Indian, Persian, Arabian, &c. became diffused over Asia, thereby perfectionating the indigenous Asiatic race.

Batoukan, his grandson, in 1621 made incursions into Poland, Hungary, and Silesia. This Tartarian invasion, followed by so many others, particularly that of Islam-Guezal, at the head of three hundred thousand Tartars, in 1649, has furnished Poland with great numbers of foreign horses; and the more so since it was the custom of the Tartars, when they went to war, to lead each of them a spare horse. This then is the epoch from which we may reckon the generalization and amelioration of the Asiatic blood among the native horses of the south of Poland; as well as part of Hungary: moreover, Poland, from the numerous connections, both fortunate and unfortunate, it has had with Turkey, has improved its breed by the introduction of a great number of oriental horses. Anciently, Poland commerced with Persia over Caucasus, through the medium of the Armenians, and obtained thereby both horses and arms. Above all, the Poles have been from time immemorial horsemen, and have procured at great expense the finest stallions.

The last war Russia had with Turkey introduced into Podolia and Ukraine upwards of eight hundred stallions.

England, a country that, on account of the excellence of its horses, may be called *the Arabia of Europe*, possesses breeds of pure Arabian blood, which by a cross with what are known as the "*Royal Mares*," imported by King James from Barbary, give rise to that noble race of thorough-bred horses in blood and form the same as the Arab: these animals however are delicate and subject to windgalls; a circumstance attributable to the humidity of the atmosphere and the luxuriance of the pasturage.

Journal de Med. Veter. et Compar. Cahier d'Août, 1827.

GLANDERS.

A Case in which the Foal of a Glandered Mare died of the Disease Sixteen Days after Birth. By M. LEGARD, *Senior Veterinary Surgeon of the 10th Regiment of Chasseurs.*

ON the 10th of February, 1826, Eleonora, a mare eight years old, was separated from the other regimental horses for showing unequivocal symptoms of glanders. (A discharge of greyish matter from the left nostril, sticking about the orifice; gland as large as a pigeon's egg, tender and loosely attached to the side of the jaw; correspondent mucous membrane inflamed.) These symptoms remained stationary until the 5th of March following, when she brought forth a foal perfectly free from any morbid appearance. From this period the symptoms became daily more alarming: the discharge more profuse, assuming a greenish hue, and fouling more the wings of the nostril; the gland more sensitive; a slight weeping from the eye of the same side; puffiness and tenderness over the correspondent part of the superior maxilla.—On the 10th, some small white tubercles made their appearance upon the mucous lining of the left nostril.—12th. Tubercles increased in magnitude and number. The right maxillary gland of the foal swollen to the size of a nut without tenderness or adherence, on which side defluxion has commenced; a tubercle is visible upon the inferior part of the same nostril; and small farcy buds are observable along the course of the right jugular.—13th. The tubercles in the mare have enlarged; they seem to coalesce; the discharge is profuse in the extreme, and still more viscous. The foal discharges from both nostrils, but particularly from the right; the flux is tenacious; the tubercle has grown larger.—14th. In the mare, some of the tubercles have suppurated. In the foal fresh tuberculous concretions are developed in the lower part of the nostrils.—15th. There is no distracting the wings of the nostrils without causing a dropping of blood from the membrane. The first perceived tubercle of the foal has suppurated: those discovered yesterday are softened.—16th. Small ulcerations visible upon the internal wing of the left nostril of the mare. The ulceration arising from the suppurated tubercle in the foal, spreading.—17th. The tubercles last discovered in the foal have become abscesses; respiration is very difficult; several farcy buds upon the upper lip and upon the croup, particularly on the right side.—18th. An infinity of little tubercles have made their appearance

upon the pituatury membrane of the foal, accompanied with tumefaction of it; flux extremely viscous; left gland more voluminous; respiration very laborious.—19th. The foal can hardly respire; the tubercles have all run into abscesses, forming but one sheet of ulceration; the flux sanguineous and profuse on both sides. Same day, at noon, the nostrils becoming completely obstructed, the animal died from suffocation.

The Post-mortem Examination commenced eight hours after death, and was conducted in the presence of the Assistant Surgeon and Assistant Veterinary Surgeon of the Regiment. Spots of transient inflammation upon parts of the small intestines. The mucous membrane of the nose covered with tubercles, mostly in a state of abscess; the middle part of the left and entire surface of the right nostril studded with exulcerations penetrating through the substance of the membrane; the wings both covered alike with tubercles as large as peas, and their interior studded with them; the ethmoidal convolutions of a bright scarlet hue.

Conclusion. The symptoms and morbid appearances after death of this foal leave no room to doubt that glanders was the cause of dissolution; whose origin many would attribute to contagion, without any regard to hereditary influence. Nevertheless, the following experiment seems to afford sufficient evidence for believing that this dread malady was bred in the foal within the womb of its dam.

Case of a Foal that was suckled upwards of Six Months by the same Glandered Mare without manifesting any Sign of the Disease. By the same.

AS a sequel to the preceding case, and in order to convince myself whether glanders in the subject of it was the result of contagion, or an hereditary consignment, I asked and obtained permission of my Colonel to have a foal of the same age, also the property of the Regiment, suckled by the dam of the one recently dead.

The 21st of the same month, (March) this foal, strong and in the full enjoyment of health, was led into the stable occupied by Eleonora, who readily adopted it.—22d. The mare appears to be much attached to the foal, and it is almost always sucking; she expresses uneasiness when it goes from her; the nasal flux continues abundant. I recommend that the same articles be used about the colt as about the mare, and that the sponge be

first covered with mucus from the nose of the mare before his be sponged.—April 5th. Tumefaction of the vulva of the mare and parts contiguous to the anus, from farcy.—8th. Farcy buds upon the tumefied parts, and upon the mucous lining of the vagina. —12th. Ulcerations in the vaginal membrane; accompanied with fetid and ichorous discharge from the vulva.—From the 18th to the 26th. The farcied parts have become indolent. (All that has been done amounts but to cleanliness.) The foal thrives surprisingly.—27th. The mare has declined much in condition. On this day, from a horse belonging to the 3d squadron (*capricornus*) about to be destroyed for glanders, which had eroded the septum nasi and was now tending towards suffocation, I took a considerable quantity of glandered virus which I insinuated with my fore finger into the nostrils of the foal.—May 10th. Nothing particular has occurred in the interval. The mare has been attacked with a hemorrhage from the superior part of the left nostril: she declines rapidly. The health of the foal increases with his age.—17th. The stable occupied by Eleonora and her foal being about to be pulled down, they were removed into the corner of another little stable, in which were six other horses considered glandered, notwithstanding they showed no perceptible ulceration. The same as these horses, she was, from this time, placed on green diet.—The foal, though he ran about from one to the other of these diseased animals, and was constantly besmeared with matter, showed nothing particular until the 23rd.—24th. The right submaxillary gland of the foal is triflingly swollen; it is about the volume of a nut, rolls under the fingers, and is free from tenderness.—25th. Slight augmentation of the gland.—27th, 28th, and 29th. Sensible diminution of it.—30th. Totally imperceptible. I attributed this swelling to the use of green-meat, to which the foal betook himself with avidity when he had forsaken the teat of his stepmother.—June 1st. I introduced into the nostrils of the little animal some mucus I had just extracted from those of one of the horses in the same stable, and who was doomed to destruction on account of glanders.—10th. Vegetation being too far advanced to longer furnish green food, the regimen was changed to dry without any notable effect.—The 15th. The horse of an officer, *(le Furibond)* having acute glanders and farcy, being about to be sacrificed, afforded me another opportunity of again smearing the interior of the nose of my foal; but without effect. —21st. The Inspector-General, Count de Lauriston, in his review of the regiment, seeing the condition of Eleonora, ordered her to be instantly put to death; but the order was suspended as soon as he was apprized of the experiment in progress.

Three of the horses in the same stable with the mare, with whom the foal was in constant intercourse, sunk under the axe. I made use of an enormous quantity of matter about the foal which in them was the occasion of death.—Sept. 15th. Of late the disease in the mare has seemed stationary as it were: the nasal partition is at present nearly perforated; the discharge has a pestilential fetor; the gland is about the size of a small hen's egg, very tender and firmly adherent.—24th. I repeated the introduction of matter into the nose of the foal, taken from a troop horse going to be destroyed; but ineffectually.—The regiment being under orders to move, Eleonora and six other glandered horses in the same stable were killed on the 3rd of October. I regret much that the distance of the place destined for her destruction, and my occupations the day before our march, deprived me of the satisfaction of inspecting the body of Eleonora, in whom the disease had doubtlessly made great ravages.

I shall not indulge in any reflections on the result of this experiment; I merely invite my professional brethren to repeat it whenever an opportunity may offer; and shall confine myself to remark, that, notwithstanding the foal was submitted long and often enough to the infecting agents, it throve in a surprising degree in the very midst of their influence. Many persons became its admirers and wished to have it: I sold it to a respectable individual who made me a promise that he would retain it in his service and closely watch it. *Journal Pratique de Med. Veter. et Clinique. Cahier de Janvier*, 1827.

The two foregoing practical observations on a disease which has in every age perplexed the mind and baffled the art of the Veterinarian, circumstantial and minute, and accurately reported as they appear to be, we cannot pass over without throwing out a conjecture or two by way of solution of the apparent incongruity of them with the doctrines of our school, and even, according to these doctrines, irreconcileableness with each other. To proceed upon sure grounds, we do not anticipate any hesitation to the concession, that the disease under which the mare and her own foal laboured was the *glanders;* neither do we imagine that it will excite any surprise that the foal should

have taken the disease from its dam : the question for consideration is, whether this was the result of contagion or hereditary influence. If it be ascribed to the latter, what proofs have we of it besides that of the inadmissibility of contagion? if to the former, how comes it that her own offspring before birth, and her foster-foal after birth, escaped the malady?

Professor Dupuy says, on the subject of hereditariness, "I knew a mare whose body on dissection presented every appearance characteristic of glanders: her filly died at the age of 4½ years of the same tuberculous affection. The other offspring of this mare inherited her particular conformation, and her propensities to bite and kick. Another mare and her foal discovered on being opened the same organic lesions as the preceding animals. I have made similar observations on the exa mination of a third mare and her foal." The same author proceeds to observe, "That the tuberculous disease in oxen, sheep, and swine, known by the appellations of rot, husk, &c. is likewise transmitted from one generation to another." That, in all probability there are such things as hereditary diseases, among horses at least, we shall on some future occasion show strong reasons for believing : in the present instance, we do not wish to refuse assent to its influence, neither do we wish to be led into any premature concessions ; we are merely desirous to set the question free from some absurd notions and unwarrantable prejudices too prevalent among the profession in this country, not only on the subject of hereditariness, but more particularly on that of contagion. According to the doctrines of Dupuy, we should say, that the foal nurtured the seeds of the disease at birth, but that time and various incidental agents were wanting to mature and manifest them in the external form of glanders ; whereas, advocating contagion, it would enable us to offer a more intelligible solution of the problem. The experiment afterwards made with the foster-foal neither in our mind confirms the opinion of hereditariness nor disproves the contagiousness of the malady. It does not follow, because the foal took from three to four pints, or upwards, of the mare's

milk daily, that the imbibition should have the effect of inoculation; no more than that the transfusion of two quarts of blood should not produce the disease while a gallon would: Mr. Hunter concluded that the blood was never infected because he could not communicate disease by inoculation with a single drop or two of it; but it has since been shown to be capable of infecting, and even destroying, by transfusion. With regard to the foster-foal not catching the disease from the dam—it appears, that, in the very midst of contagion and with every likely means *but one* essayed to produce it, the animal escaped it; but, did it escape in consequence of the non-contagious nature of the malady, the insusceptibility of its own body, or the mode in which the contagious virus was applied? Setting aside susceptibility—that inexplicable but convenient resource of the pathologist—the question comes to us in a simplified and more answerable form, *viz:* Is it possible to communicate glanders by bringing the virus into contact with the membrane lining the nose, unless there be abrasion or lesion of the surface? If it is, why was not the foster-foal contaminated? why was not the mare's own foal contaminated within the womb? finally, why was not the disease communicated in hundreds of similar instances we might adduce from various writers, besides many from our own observation? But, granting that glanders is not communicable but by actual contact and abrasion, does it *necessarily* follow that her own foal must have inherited the disease from the mare? Is it not possible—nay, within the pale of probability, that it might have contracted the malady from the same unknown causes to which its dam (or, if not she, the other glandered horses) owed the disorder? We shall, in a future number, return and enter more at large into the consideration of these highly interesting and important questions.

Ed. Vet.

HYDATIDS WITHIN THE BRAIN AND SPINAL MARROW OF THE SHEEP.

OF all animals the sheep is the most subject to verminous disorders, and at the same period of life when others have them, namely, during growth: it is between the first and second years that cerebral hydatids commonly manifest themselves, occasioning a giddiness or staggers, which, though a symptom of several other affections, is not always attended with the fatal result of which it is indicative in this disorder.

This inevitably fatal termination has induced farmers, on the appearance of the malady, to sacrifice the sheep before they have lost their condition; though in other cases every means have been tried to get at the hydatids, such as trepanning, perforating the skull with a file, an awl, a hot iron, &c. Sheep previously destined, or at the time of their attack fit for the butcher, are wisely so disposed of: such only become subjects worthy of our endeavours to preserve as are kept for their wool, or as breeders, or on account of some peculiar estimation.

Prior to the performance of any operation, the seat of the hydatid must be ascertained. Now, up to the present day, so vaguely has this point been determined that our directions are to wait until the hydatid by augmentation and extensive ravages has attenuated the skull so as to render it flexible under the finger. Some assert, and rightly enough, that the worm will generally be found on that side of the brain towards which the animal staggers. But the information we want is that which will direct us to the *precise spot* to be operated on. And what renders this problem more embarrassing is the fact of hydatids having been found not only within different parts of both the cerebrum and cerebellum, but even within the spinal marrow. At least, such was the case of a Merino sheep, brought to us in July, 1827, on account of paralysis of the hind quarters, on which M. Girard had intended to investigate the nature of another species of verminous disorder that had proved fatal to many of the same flock. Within the cerebrum was found an undeveloped hydatid, of the size of a nut, growing between the brain and the arachnoid membrane, over the corpus striatum, at the anterior extremity of the left hemisphere.

The posterior third of the spinal marrow, inordinately increased in volume, completely filled the canal, all the way from the last dorsal vertebra but one to the sacro-vertebral articula-

tion. No sooner was the vertebral theca of the tumid part slit open than out sprang an ovoid vesicle, which, dilatation of the opening showed to belong to a larger cerebral hydatid lodged within the middle of the posterior part of the spinal marrow, separating its two component chords; so much so that when stripped of their membranous envelopes they were perfectly disunited. The parietes of the cavity excavated by the hydatid, were covered with yellow spots, looking like adhesions sticking to the folds of the arachnoid where it divides the two spinal chords.

Although this occurrence stands as yet unparalleled in the annals of veterinary medicine, we do not believe that the presence of hydatids within the spinal marrow can be so rare as might be imagined: in truth, so seldom is the marrow examined that its diseases are perfectly novel to us. The case puts us in possession at least of two facts: *viz.* that hydatids are not confined to the brain; and that, notwithstanding their presence within the cerebrum or cerebellum may be indicated, we have no guide to direct us to the place where we ought to operate.

Before we can arrive at a certain diagnosis we must learn to distinguish the symptoms arising from the lesion of any particular part of the brain by the worm. Such observations might prove curious in relation to physiology, at the same time that they afforded a prospect of success to the operation, and particularly when undertaken before the brain had sustained much injury: for, such are the ravages already made in most of these cases that the number of animals that die after the operation greatly surpass probably the number of recoveries: at least, the number and variety of operations that have been proposed, without any one of them coming into general adoption, and the paucity of recorded cures, taking no notice of the number and nature of the complicated and more fatal forms of the disease, lead me to this conclusion. An instance of complication occurred in a sheep, belonging to the flock of the Institution, which had pined away to a weight of not more than from 25 to 30lbs. Two attenuated flexible points having, after frequent examination of the head, been detected, one on the right, the other on the left side, I perforated them with the actual cautery, making two holes about the size of pins' heads, through which issued a little drop of serum: the perforated places were afterwards covered with Burgundy pitch plasters. For seven or eight days after the operation, the animal ate little or nothing, continued to turn round from right to left as before, and manifested considerable vertigo and uneasiness. On the eighth day both plasters had become displaced: that on the left side however was only

raised from the surface by a large hydatid hanging out of the cranium, which I did not extract, being persuaded that it would entirely disengage itself. From this time the sheep became more lively, ate with avidity, and showed no signs of vertigo. Indeed we began to entertain hopes of its recovery, when on the 12th day, in the afternoon, it was found dead, without having evinced any change in the course of that day preparing us for such an event.

Examination. Within the substance of the left hemisphere of the cerebrum, over the lateral ventricle, was found a cyst, from which issued about a dram of whitish matter at the point touched by the cautery: the parietes of this cyst were thick, exteriorly almost fibrous, with an internal surface rendered rugose by several little white concretions, very hard and to appearance osseous; the surface also displayed numerous small injected vessels; and the portions of brain contiguous to the cyst were observed to be softened. On the right side, the hydatid had grown between the layers of the dura mater. The frontal sinuses contained some larva of the oestrus ovis. Death appeared to be attributable to the matter secreted within the cyst: would this have followed the use of the trepanning awl or needle, instead of employing cauterization? In answer, I cannot venture any opinion: I used the cautery in compliance with the praises that have been bestowed upon it; and even if I had completely succeeded I should but have preserved a hectic animal still requiring for his restoration more pains than he was worth. The sheep tormented by hydatids are not in general the finest of the flock, their growth being impeded by the disorder itself; on which account these very animals are deservedly rejected, be they ever so precious: which furnishes an additional reason for not breeding from weakly and blemished individuals. Let us conclude then from these reflections:—

1*st*. That it is almost always advisable to slaughter sheep showing symptoms of vertigo proceeding from cerebral hydatids;

2*dly*. That in case we should be desirous to submit them to treatment, it is expedient to study the symptoms more particularly, in order that we might be able to determine from repeated observation the part of the brain compressed by the worm, and therefrom operate prior to the irreparable injury of the organ;

3*dly*. That we should draw comparisons between the different modes of operating;

4*thly*. That the general management of the sheep in health, tending to prevent such maladies, is of great importance; and

that, against this and verminous disorders in general, all prophylactic means are comprised—in guarding against humidity; in giving wholesome and substantial food, and even some tonic condiments; in pure air; in banishing from the breeding fold the delicate and weakly, and especially such rams as have already got a sickly progeny.

My uncle, M. Yvart, late Professor of Agriculture at Alfort, remarked, that one winter that he fed his flock on cinquefoil he had less staggers among them than in any other.

The Marquis of Sainte-Fère has recently published, in the third Report of the Society for the Improvement of Wool, that since he has made use of the apparatus for disengaging oxygen gas into his sheep-sheds, it is very rare for him to hear of one with staggers.

M. Girou de Buzaseingues, in a paper on the staggers in sheep, read before the Royal and Central Society of Agriculture, on the 1st of December, 1824, and inserted in the *Annals of French Agriculture*, January, 1825, expresses himself as follows:—"I have put into practice my mode of prevention. I have fed my flock better and given them more exercise: I have had them driven on the mountains of Aveyron, where the salubriety of the air, and the extent of the pasturage, induce them to take exercise; often by playing and skipping, and where the diversity of the herbage invites them to stray about to cull the sweetest food. I have spread about salt mixed with soot. By such regimen have I strengthened my sheep, and the consequence has been less staggers among them: however, the malady has not altogether disappeared, a circumstance I am not surprised at, since I do not expect to eradicate that in a day from an organized body which is the product of many years; still, I reckon on its gradual decline, and by perseverance to get quite rid of it." This author acknowledges the unsuccessfulness of the curative means ordinarily employed, which he urges as an additional reason for adopting the preservative measures he recommends or analagous ones; there being every probability that the number of staggered sheep will be lessened thereby, besides insuring the health and prosperity of flocks in general.

Communications and Cases.

A VETERINARY NOMENCLATURE.

MR. EDITOR;

THE 12th Section of your Synopsis having for its head "Transactions at or relative to the Veterinary College at St. Pancras," and having been a Student at that Institution, and still retaining an attachment to the Profession, yet in its infancy; whether to the disgrace of one or many I cannot say; nevertheless, knowing full well the obstacles which present themselves at that establishment, and feeling assured by setting them aside we shall be more likely to attain that which is the ardent desire of every Veterinarian, I shall feel obliged by your inserting the following query. *By whose nomenclature is the Veterinary Student to be guided in his dissections?* There are, as you know, several authors who have given their respective ones, but not one has yet been vested with authority; that is to say, has been sanctioned by the heads at the Veterinary College: nor has one issued from thence. Whether this latter arise from incompetency or laziness I know not; but I do not hesitate to say the cause of the former is jealousy. That after an existence of an institution of that kind for upwards of thirty years, no one is found able or willing to produce so important an auxiliary to the well-being of this profession is surely a crying sin. It is an axiom that anatomy is the basis of all physiological and pathological knowledge; but how is the former to be acquired without some fixed laws laid down to direct and govern the inquiring mind? (It must be remembered I am now speaking in reference to students.) And without a knowledge of the former a correct and happy knowledge of the latter two cannot be gained.

I scarcely need, Mr. Editor, to express to you what advantages must attend the possession of an acknowledged and re-

ceived manual of anatomy, not only to the student but to the professional man. I will elucidate by a supposition. If a pupil in his dissections follow the nomenclature as by Mr. Coleman made use of in his invaluable lectures (from whom, assuredly, either directly or indirectly—that is from his Demonstrator—should come the Student's Manual; from his Demonstrator did I say? Who is he? Perhaps, Mr. Editor, you will be kind enough to make the inquiry, for of a truth I know the Pupils at the College would be glad to see him at his post: but more of this at some future time;) if another make use of the terms employed by Mr. Blaine, and a third those of Mr. Percival in his elegant publications—(which, for aught I see, might with a few emendations be rendered unobjectionable and adequate to the desired end) if, I say, from these different sources different Pupils acquire their knowledge of the names of the various parts of the animal, what confusion and altercation must inevitably follow when either attempts to give a description of the body! And what, Mr. Editor, is the fact? Are any efforts made or making to obtain this desideratum? I will not answer positively in the negative, but state a truth and leave you to draw your conclusions. The Professor every successive year since the publication of Mr. Percival's Lectures has been (as I am informed) drawing nearer and nearer to the names as made use of by him. Now surely it would be more to the credit of Professor Coleman were he at once to acknowledge the merit of Mr. Percival's nomenclature, or if there be errors to point them out; yea, even to the author himself, who I have no doubt would, provided he saw as Mr. Coleman did, the necessity of alteration, change such terms as are objectionable. Such however unfortunately is not the case: and what have we to complete the jumble? Why, I am most creditably informed, that the Assistant Professor is now busily engaged—that is to say, as much engaged about this as his *numerous* other avocations will allow him—in copying names from the French of Girard. Perhaps, by and by, we shall get them in broad Dutch! for where and when this business will end I know not.

What I have said, Mr. Editor, will convince you of the necessity of something definite being come to, and as the eyes of the profession are on you and will be on your publication, to you I have written for the Students' sake, hoping they will derive some benefit from your labours.

And now, Mr. Editor, in conclusion, I would say a word or two to yourself. I need scarcely bear my testimony to the necessity there is for a work of the kind you have undertaken to endite; the wide field there is for your labour; and the much good likely to accrue to the science through it. These facts are notorious. There is however a word of advice which perhaps you may not need, but which I would nevertheless give. It is, let not your pages be blotted with expressions of vindictive feelings, nor personal slander have a place therein. Let the private characters of individuals be by you held sacred; nor (as a periodical of notoriety has done) lend yourself a tool to the disappointed pride of others. Let not yours be a vehicle to traduce and caluminate; but let truth and honesty be your guide. I have seen with sorrow the means which have been resorted to by some persons under the garb of public weal to satisfy a malevolent disposition. I am fearful by such acts they will outdo their anticipated object, and the weapon will recoil upon their own heads. Mr. Editor, like the "Great Unknown," you are known, and by your works already before the public, and are much respected. My sincere wish is, that the forthcoming may be as another wreath to adorn your brow. But remember it rests with yourself!

Z.

November, 1827.

DEMONSTRATIONS AND OPERATIONS AT THE VETERINARY COLLEGE.

SIR;

AS a Veterinary Pupil, myself, and I have no doubt the Profes-

sion in general, look forward with no small degree of pleasure to your forth-coming Periodical, not only as a work of amusement but instruction. I ought to apologize for intruding upon you thus early, but the urgency of my statement I hope will plead my excuse.

Professor Coleman in his Introductory Lecture stated, among other sources from whence we were to gain our information, that Mr. Sewell (the Sub-Professor) would demonstrate to us; by which, I understand an accurate anatomical description of the different parts of the Horse. The same thing was promised last year; but the demonstrations—if *demonstrations* they could be called—were so few and so imperfectly done that they would have disgraced even a junior pupil. We have again commenced this season, Sir, just after the old plan; which I can only attribute, either to a great dereliction of duty or a want of capability on the part of the Sub-Professor. Why do not we have in this, as in all other schools of anatomy, one hour set apart daily for demonstration?

Again, all operations are performed on the *intermediate days* of Mr. Coleman's lecturing; when *not half* the pupils are present, from their residing at considerable distances and the uncertainty of any operations being performed. *Due Notice of all Operations ought to be posted in the Theatre.* There are so many disadvantages under which we labour that it would occupy too much space to state them at present: but, if you consider this of sufficient importance, I may again intrude myself upon your notice. I beg to remain, yours, most obediently,

A Veterinary Pupil.

November, 1827.

THE

PRODUCTION OF MILK BY ARTIFICIAL MEANS.

To the Editor of the Veterinarian.

Mr. Editor;

THE Profession and the Public will have great reason to applaud the publication of *The Veterinarian*, a journal much called for, and one that will no doubt meet with ample support. For the present I shall confine myself to a case which I consi-

der comes strictly within the views of your intended journal, and is particularly interesting to rural economists. I allude to the production of milk by artificial means. The case is as follows: *viz.* A five-year-old middle-sized Cow, in full health, calved the latter end of March. From that period to July she gave about four gallons of milk per day, which yielded eight pounds of butter per week: from this time, grass becoming short and the dry weather continuing, she decreased in her milk, so much so that at Michaelmas she gave only one gallon a day, and the butter diminished in the same proportion; at which time she was taken into the cow-house, and allowed to go a few hours in the day into a small paddock. Some sweet hay was now cut into chaff, and boiling water poured upon it; and this infusion was allowed to stand, covered over, from the morning until feeding time in the evening; which being given, more was put together for the next morning's feed. This has been continued to the present day. I find, on weighing the chaff and measuring the water, that she consumes twenty-eight pounds of hay in chaff and twelve gallons of water every day; and that the quantity of milk at this period is nine quarts and a pint daily; which yields five pounds of butter per week. You will therefore perceive, that, *although three or four months more have elapsed since the time of her calving, the product of milk and butter is more than doubled.* It may be readily imagined, that, from an animal living upon sweet hay alone, the milk and butter are of a peculiarly fine flavour. In breeding studs, I apprehend this plan of cooking the diet for brood mares, will be found advantageous, particularly to those mares which produce but little milk, and to old mares whose teeth are not good enough to grind dry forage. Wishing you every success in your arduous undertaking, one that cannot fail to be extensively useful, I remain, yours, &c.

VETERINARIUS.

Nov. 15, 1827.

To the Editor of the Veterinarian.

SIR;

I BEG leave to thank you for the Prospectus of *The Veterinarian,* and to congratulate my brother Practitioners on the announcement of such a work. With a feeling of degradation,

many of us have perused the recorded opinion of foreign Veterinarians and Professors, that we have but few works that would not disgrace the most ignorant farmer; and that, notwithstanding the importance attached to our beautiful race of horses, and their undoubted superiority, Veterinary Medicine is less advanced as a Science in England than in most other countries. This feeling of degradation has painfully increased when we have been compelled to acknowledge the perfect truth of the assertion.

The causes of this degraded state of our Profession are sufficiently evident. The imperfect education of the Pupil, limited in the subjects to which his attention is directed, and more sadly and inexcusably limited in the time devoted to preparation;—and the want of some medium through which our improvements or our suggestions may be communicated to one another.

The force of general opinion will soon rectify the former; and *The Veterinarian* will supply the latter.

Conducted on the pure and honest principle of zeal for the advancement of Veterinary Science, and lending itself to no party purpose or private pique, the success of *The Veterinarian* is assured.

Anxious to become an occasional co-operator in so good a work, I send for your consideration a few remarks on the symptoms of *Rabies Canina*. Should you deem them worthy of insertion they will be followed by some observations on the post-mortem appearances, and the nature, seat, cause, and preventive and curative treatment of the disease. I am, &c.

W. YOUATT.

Nassau Street, Dec. 3, 1827.

RABIES CANINA.

THE earliest symptoms of madness in the dog are sullenness;

fidgetiness; continual shifting of posture; a stedfast gaze, expressing suspicion; but, when directed on the master, soon clearing up, and followed by some action indicating affection.

An earnest licking of some part, on which a scar is generally found. If the ear be the affected part, the dog is incessantly and violently scratching it. If it be the foot, he gnaws it until the integument is destroyed. He gets into a passion with it, and growls over it; and is so insensible to pain, that in one case the foot was dreadfully mangled, and in another the greater part of the penis was gnawed away.

Considerable costiveness; occasional vomiting; a depraved appetite very early commences; bits of thread, hair, straw, dung, are picked up; and very frequently the dog will lap his own urine, and devour his own excrement. The animal now becomes irritable; flies fiercely at strangers; mumbles the hand or foot of his master; is impatient of correction; seizes the stick of a whip; quarrels with his own companions; eagerly hunts out and worries the cats; demolishes his bed or carpet; gnaws and shakes his chain; makes the most violent efforts to escape; tears to pieces his kennel or the door by which he is confined, and breaks his tushes in the attempt. If he escapes he sometimes attacks those dogs only that fall in his way; or, if naturally ferocious, he will diligently and perseveringly seek his prey. He will overcome every obstacle to effect his puspose, and at length returns to his home completely exhausted.

The desire to do mischief depends much on his previous disposition: it often proceeds not beyond an occasional snap, and then only when purposely irritated. But with the fighting dog the scene is terrific: he springs to the end of his chain; he darts with ferocity at some object which he conceives to be within his reach; and is eagerly employed in destroying every thing around them.

Very early in the disease the expression of the countenance is changed. The conjunctiva is occasionally highly injected, at other times scarcely affected; but the eyes have a peculiarly bright and dazzling appearance, accompanied by a slight strabismus; not the protrusion of the membrana nictitans as in distemper, but an actual distortion from the natural axis of the eye: the lids of one eye are frequently contracted; twitchings begin around that eye, and gradually spread over the face. About the second day a considerable discharge of saliva commences; but this does not continue more than ten or twelve hours, and is succeeded by an insatiable thirst: the dog is incessantly drinking or attempting to drink; he plunges his

muzzle into the water. When the flow of saliva has ceased he appears to be annoyed by some viscid matter in the fauces, and, in the most eager and extraordinary manner, works with his paws at the corner of his mouth to get rid of it; and, while thus employed, frequently loses his balance and rolls over.

A loss of power over the voluntary muscles is now observed. It begins with the lower jaw: it hangs down and the mouth is partially open; by a sudden effort he can sometimes close it; occasionally the paralysis is complete. The tongue is affected in a less degree: it protrudes from the mouth, and becomes of a leaden colour. The dog is able to use his tongue in the act of lapping, but the mouth is not sufficiently closed to retain the water; therefore while he hangs over the fluid, eagerly lapping for several minutes, it is very little or not at all diminished. He catches at his food with an eager and ill-directed snap, and often fails in his attempt to seize it; he bolts it unchewed, or drops it in the act of chewing. In the more advanced stage of the disease this paralysis frequently disappears from the head, and attacks the loins and extremities. A peculiar indecision attends every motion; the animal staggers about, and frequently falls. Previous to this he is in almost incessant action: he scrapes his bed together, and disposes it in various forms; he starts up and eagerly gazes at some real or imaginary object; he traces the fancied path of something floating around him; he fixes his eye intently on some spot on the wall or partition; he suddenly plunges at it; his eyes then close and his head droops; in an instant he starts and gazes wildly around. The voice of his master re-calls him from this delirium; he acknowledges him and endeavours to fondle on him, but in a moment he is wandering again.

He frequently, with his head erect, utters a short and very peculiar howl; or, if he barks, it is a hoarse inward sound, altogether dissimilar from his usual tone and generally terminating with this characteristic howl. Respiration is always affected; often the breathing is very laborious, and the *inspiration* is attended with a very singular, grating, choaking noise.

On the fourth, fifth, or sixth day of the disease, he dies; occasionally in slight convulsions, but oftener without a struggle. Of the symptoms, popularly, but erroneously supposed to accompany Rabies, I will only say, that the rabid dog never has fits: the existence of epilepsy is a clear proof that there is no Rabies. There is *no dread of water; no spasm attending the effort to swallow;* but a most extraordinary and unquenchable thirst. There is *no fear excited in other dogs, no wondrous instinct warning them of danger.* There is *no peculiar and offensive*

smell; no running with the tail between the legs, except when weary and exhausted he is seeking his home; *no pustules in or near the frænum of the tongue.*

(To be continued.)

HYDROPHOBIA.

The following Narrative of Occurrences was sent to us by Mr. King, *Veterinary Surgeon, Stanmore.*

A SHEEP-DOG belonging to a neighbour was observed, on the 7th of February, 1822, to deviate from his ordinary habits and accustomed controul: he would pursue the sheep as usual when directed, but not without evincing signs to bite them, which was contrary to his former disposition. His voice also underwent a peculiar and very remarkable alteration. On learning all this, his master ordered the dog to be put into confinement; which however was not done until the following day: so that the animal was suffered to run at large among the various cattle for the whole of the first and part of the second day of his discovering such dubious and alarming irregularities. The same day the dog was confined he bit the shepherd severely in the fleshy part of the thumb as the man was attempting to administer some medicine to him: the wound bled very little; it was bathed in spirits of turpentine; it rapidly healed, and no more concern was felt about it.

9th. The dog died.

28th. A sheep was bitten and died hydrophobic.

March 2nd. Another sheep and some hogs were successively seized by him, and all died rabid. The shepherd now became alarmed for himself. I met him by accident, and finding that he had great confidence in the preventive effects of some me-

dicine compounded by a poor man, named Webb, residing near Watford, I advised him to take the medicine, and afterwards go to the sea-side; which advice he took: the wound being, prior to his leaving, perfectly skinned over.

3rd. One of the horses in the same place was observed to be unwell. The next morning one of the men employed in the stables thinking that a urine ball might prove serviceable to the animal, endeavoured to exhibit one; in which act he got his hand and arm much abraded, the skin being in many places penetrated quite through. In the course of the afternoon the horse became perfectly unmanageable: I was sent for; but he died in a few hours from the time, decidedly rabid. The man he had bitten took Webb's medicine, and expressed himself quite satisfied with its efficacy: but his master insisted on his also going to the sea-coast. Both the men escaped, and have continued to this day in perfect health.

Webb's Prophylactic is noticed by Mr. Blaine in his *Domestic Treatise on the Diseases of Horses and Dogs;* which, under the head of "Madness," gives the most correct and clear account of the disorder that I ever read. In regard to the medicine, I may observe, although I have known it to fail frequently among animals, of the many hundreds of persons that must have taken it, no individual to my knowledge has suffered from Hydrophobia.

Stanmore, December 11, 1827.

Cases or Communications, addressed to the *Editor of the Veterinarian,* at the *Printer's,* (post paid) will meet with due consideration.

John Hill, Printer, Black Horse Court, Fleet Street.

THE

VETERINARIAN.

VOL. I. FEBRUARY, 1828. No. 2.

TO OUR CORRESPONDENTS.

IN our examination into the state of Veterinary Periodical Literature, in the First Number, in hinting at the presumable and even palpable advantages possessed by such works in general over the single and occasional productions of individuals, we offered as one reason (and perhaps it is the one upon which we may most safely repose)—"because the latter is solely dependent upon the labour and ability of one or two persons, whereas the periodical is mostly the product of the contributions of many." Now, pray, who are the many? The many we had in our eye at the time we penned the word, are those individuals who have already—so early—favoured this Journal, and those who may hereafter do so, with communications; to them it is that are addressed the observations that follow, not doubting but, upon a serious, deliberate, impartial examination of the subject in their own minds, in all its bearings and relations, they will approve of the course about to be taken towards establishing *The Veterinarian* upon a basis, no less firm than respectable in itself, no less creditable than advantageous to the Journal, to the Science, and to the Profession.

The value of Correspondents to such miscellaneous publications as the present, has been felt to be such at all times that Editors in general may be said to make it an important part of their study, to discover by what means and in what ways they are with most success invited to flock around the standards to which, from profession, interest, or caprice, they do, or choose to, respectively belong. We have nothing to do in this account with those anomalous beings who, perverting their own understandings and running counter to common sense, profess to know more by instinct than others do or can by learning and

experience—who, in their own superstitious folly, were from their cradle—nay, from their very exit from their mother, endowed with more knowledge than can be acquired by any application of mind or body, any capacity, means, or opportunities. Perhaps there is no art or science that experiences more incursions of this description than the Veterinary; and we may add, but one, and that the kindred science of medicine, which can feel such fatal consequences therefrom: the Veterinarian is pushed out of the stable by some illiterate groom or coachman, or, with yet more repugnance to reason and common sense, is supplanted or thwarted by a man of education, so short-sighted as to fancy himself one of the instinctively endowed, or, what is as absurd, to pique himself upon an experience he knows not how to reason on, and consequently not to profit by; and, as one glaring absurdity seldom fails to beget another, we have sportsmen—pure genuine foxhunters, writing on *chronic cough* and *the diseases of hunters*, as if the very circumstance of the hunter being the subject of these maladies, brought the disease, as well as the animal, (and the saddle and bridle too, we suppose,) within their precious omniscient observation.

But, to put an end to this digression, wherein we have been led away somewhat imperceptibly, and to resume our original thread, we were going to break to our Correspondents what strikes ourselves to be a plan replete, not only with the interests of the science, but with their own individual interests; inasmuch as it is one that will show the Public who those of the Profession are deserving of their confidence, while it affords tolerable satisfactory evidence to the Members of the Profession themselves, of the knowledge, ability, and zeal, respectively diffused amongst them. And as there are no stronger incentives to exertion than emulation and responsibility, so, we conceive, in the same ratio in which our plan of future proceeding involves these considerations, in that same degree must it turn out to be advantageous to the science. Thus much premised, we proceed to make known our intentions.

We do not like, at this early period, to go so far as positively to declare we will refuse to insert any Communication of any description that may not have the author's name affixed to it; but we have come to a resolution to be more than commonly fastidious in regard to *anonymous papers*, and more especially such as may in anywise reflect upon the character or conduct of individuals. Our purpose is science not satire; our views of reform such as will conciliate, not such as may tend to widen those breaches which are no less injurious to our common inter-

ests than detrimental to the art we in common profess and practise. We are well aware, in forming such a resolution, that there are some potent and influential objections to be urged against us; but, let it be remembered on the other hand, that the present system of anonymous writing is also one far from being unexceptionable: indeed, we have our doubts, abused as the latter has been of late, whether it has done most good or most harm to the cause it professed to espouse and the interests it stood pledged to protect. There are comparatively in society but few individuals who can be said to be even tolerably fitted for the duties of criticism and literary dominion; and few indeed even out of those who have sufficient discernment, rectitude, and independence, to mete out praise and censure with equal impartiality and justice. Criticism may be said to be to the mind what the actual cautery is to the body: judiciously applied, a most potent and efficient agent; injudiciously handled, a cruel and destructive instrument; and, to pursue the metaphor, both are likely to be employed with most judgment when the operator finds himself, nominally at least, if not morally, responsible for his undertakings. Were not it the custom in this country for critiques to be anonymous, the press would not be infested with that race of unprincipled scribblers with which it teems at the present day—in medicine as well as in politics: such as were really capable would then appear alone in the character of critics; pretenders would hide their "diminished heads;" the demon of sarcasm would sink into that gulph of infamy into which he would, to serve his own base purposes, hurl all those who might stand in his way.

We might be induced to pursue this subject further did we not imagine that enough has been aleady said to draw the attention of our subscribers to its bearing, and to convince them, whether the step turn out to be politic or impolitic as regards ourselves, it is one we are prompted to take in consideration of the respectability of our journal, and the unanimity of the profession.

He who labours in the cause of science, whatever his labour may amount to, acts a meritorious part and deserves the acknowledgments of his professional brethren; and ought, in justice to himself and satisfaction to them, to annex his name to his performance: and he who writes with a view to correct the conduct of others or reform abuses, and has not the courage or candour to subscribe his signature, is the most likely of all other persons at another time to find fault without cause, asperse private character, make a stab at reputation, and thus do more harm by one such lampoon than the amount of good from

all his writings of an opposite tendency put together. In the French periodicals, we find no article, not even the review of a work, appearing without the name of its author subjoined: were such the practice in this country, private character would be spared many pangs; the gentlemen of the bar, many briefs.

In furtherance of our present designs, we propose giving upon the cover of our journal a printed list of the names of our Correspondents; they must be regarded as fellow-labourers—*collaborateurs*, as the French better express it—in this nursery of a science of growing utility and importance, and therefore are entitled to all the credit of contribution: it is right that others should know on what authority statements are made; it is due to those making them that no one else should run away with the credit of them.

MR. SEWELL'S INTRODUCTORY LECTURE, 1827.

MR. SEWELL commenced by observing, that he felt a diffidence in meeting the gentlemen present, after the different lecturers in town whom they had been in the habit of hearing. That he should not take up their time with a history of the Science, as they would find that in different works on veterinary subjects. He would state however what he conceived must have been the origin of Veterinary Science. Possessors of flocks and herds of cattle and horses, must naturally have had their attention drawn to their various maladies, and have been induced to make endeavours to cure them. It does not appear however to have been reduced to a science until the time of the Greeks and Romans; but it more especially became one among the Egyptians. However, it is useless to take up time about this: its origin might be proved to be as ancient as that of human medicine. Hippocrates did not disdain the art; and Xenophon, one of the greatest generals of the age, practised it, and has written on the science. Among the Romans also we have, as celebrated veterinarians and authors, Columella and Vegetius: one wrote in the 2nd, the other in the 4th, century. Even the poet Virgil has devoted a part of his work to veterinary subjects; as the 3rd Book of his Georgics shows: he practised in the stables of Cæsar Augustus, and was rewarded by that Emperor; indeed, he has proved himself to have been well skilled in the art. After this, arts, science, and history began to decline, and were buried in obscurity for a thousand years, which

thence were denominated *the dark ages:* and it was not until long after this that the veterinary art began to show itself again.

About the 16th century, the arts and sciences, and among them the veterinary, began to revive. Different treatises made their appearance on our art: among the earliest of which were those of Solleysell, Bourgelat, and Lafosse. Up to this period there were no Schools. In 1762, the first Veterinary school was opened at Lyons, in France. Four years afterwards, the largest of the present French Schools, that at Alfort, was opened. The example of the French was soon followed by the Germans; a school among them was opened at Vienna; another at Berlin. It is rather singular that this country, so celebrated for its beautiful race of horses, should not have taken up the art before 1792: in that year an agricultural society resolved to establish a school in this country; about the same period also another agricultural society was occupied on a plan of the same kind; the result was a union of the two societies, under the name of the Veterinary College of London. Saint Bel, a gentleman from the School at Lyons, (where he was not considered as a veterinarian, but had merely studied as an amateur) was appointed Professor: however, he did not survive two years after his appointment. In this society, Sir Arthur Young appears to have been the principal agent in the veterinary affairs. Besides Solleysell and Lafosse, senior and junior, Bourgelat, in France, much distinguished himself. The present Professor Girard, who has retired from the anatomical chair, at Alfort, has attained much honour and distinction: his works have been translated at the German Schools by order of Government; being considered the best. Hearing of these Schools, some few years ago, Mr. Sewell determined on visiting them. He set out with a resolution to collect all the information he could, and to look with an unprejudiced mind: he purchased all their works, and had great varieties of shoes presented to him. In what they differ from us, he found much to approve and admire.

This School has existed now about thirty years, and there are several members of it that have rendered themselves eminent, some by improvements in practice, others as authors. B. Clark has written on horse-knowledge. St. Bel has left us several detached works. Mr. White has published generally on the art; also on cattle, sheep, and dogs. The next work, and one that is read more generally among us, is Blaine's. The Professor's work comes the next: you are all acquainted with his system; you will do well to study it. After this come some

minor works. Lawrence's will be found useful: but those who wish more particularly to study the geometrical proportions of the animal must read Bourgelat. Mr. Goodwyn's is next: that gentleman published a system of shoeing, which he has had ample opportunities of proving at Carlton House Stables. The next is that of Mr. William Percivall, which those who are engaged in study will find a great acquisition: the First Part, I believe, is out of print at present; but it is to be hoped it will not be long before that gentleman publishes a second edition. Mr. John Lawrence has published a very useful work for such pupils as are not horse-men: he gives the different breeds and species of horses, and purposes for which they are used. Mr. Percivall's Lectures, it must be added, contain all the physiology and diseases of the horse.

Mr. Sewell, next, proceeded to state that he did not mean to confine himself to horses, but should extend his observations to sheep and cattle, as far as his knowledge of their diseases would permit him: it is a very useful branch of knowledge; although there are some Veterinary Surgeons who will not undertake to practise it—He should also call their attention to that branch of the science included under veterinary medical jurisprudence. Human medicine is practised in different branches; but our profession never has, nor probably ever will be so divided: however, it is admitted that general practitioners form the most useful class in the country, and belonging to the same or a similar class may veterinarians consider themselves.

We are often called on to perform operations on very different occasions from surgeons—operations originating in caprice—to give ornament; such as docking, nicking, cropping, &c. also that very absurd practice of *re-docking*, but lately introduced. Nicking is objectionable on the score of humanity. Firing used to be much and is still practised in some parts of the country; but it is falling fast out of use—giving way to a more rational and humane practice: Mr. S. has met with many who have relinquished it for what he calls *the cooling treatment*—reducing inflammation. Firing used to be performed on young unbroke colts, on the same principle that our forefathers fired their wrists—to strengthen the sinews: but Mr. S. believes the practice is now exploded. Castration is another of this class of operations. There were and still exist persons who go about the country as *cutters*—gelding pigs and sheep, as well as horses: this, some veterinarians refuse to do on the score of the remuneration not being compensatory to the trouble and risk; but they will attend the case should any untoward symp-

toms appear. These cutters become very expert operators from pure dexterity and practice, without possessing any science: they often get great credit by the skill they acquire from practice, and are frequently employed to the exclusion of the veterinarian, being from their dexterity and expertness considered by their employers to be in possession of the science as well. These practitioners will probably continue to cross the Veterinarian for years to come.

Those who have not been accustomed to horses will frequently find themselves very much at a loss for that practical tact, called horse-knowledge, and in consequence may lose the confidence of their employers: it is therefore advisable that such should acquire this knowledge, to such a degree as to surpass those who are already in possession of it, and may employ them; for such practitioners generally succeed the best. The world will give you credit for knowing the medical part, when you show them that you are familiar with this. Books will serve you but little way; you must study the book of nature; observe the animal from colthood to decrepid old age: and also attend to the foaling process.

As far as the professional part is concerned, you should make yourself familiar with the pulse, so as at once to fix in your minds decisive and undeviating rules concerning it. Mr. S. is greatly mistaken if the pulse has not been over-rated by all who have hitherto written on the subject. Go and count the pulse and respiration of any horse in health; during sleep perhaps is the most favourable time: and you will find the average pulse 32; it rarely rises as high as 36, or sinks below 28. It is set higher by most others: how it has happened Mr. S. does not know. The respiration also is set much higher than he has found it to be. In ordinary breathing the respirations are six per minute; during sleep not more than four. This is very important to know; because disordered respiration forms one very important part of our practice: for in judging of wind, gallop a horse out of breath—agitate his respiration, and then let him rest quiet, and his disturbed heaving at the flanks will speedily subside, though it may have been violently excited; whereas, if the horse's lungs are diseased, the breathing will require several minutes for its subsidence and tranquillization. Mr. S. considers a pulse above 40 as indicating disease. If it mount up to 100, and continue so for three or four days together, the animal seldom survives. In some diseases the pulse remains unaffected: this is the case in pure spasm of the bowels—the pulse is not increased. All this goes to show

the necessity there is for you to attend to the animal although in a state of health, in order that you may be able to discriminate correctly between health and disease.

The next consideration is *Anatomy*. The bones must be studied in health in order to know when they are diseased. After the bones come the muscles and ligaments, and then the bloodvessels. It is this knowledge, so useful to you, that has made empirics, before bold and fearless operators, afraid to operate at all. Without such knowledge, neurotomy would never have been discovered. Wounds of arteries are very serious, and by such knowledge alone can be treated. After this, Mr. S. strongly recommends the study of morbid anatomy: it was this study well cultivated that made Dr. Bailey so eminent.

There is one work, said Mr. S. here, which I ought not to have forgotten to mention; and that is Boardman's Dictionary. There is also White's Veterinary Dictionary, a very useful work for any one to have in his possession.

Some of our Members have distinguished themselves by the invention of shoes. The most ancient of these inventions is *the shoe with the joint at the toe:* it was used in Queen Elizabeth's time. Bracy Clark has taken up this shoe with great zeal and thinks that it must at some future day become the general shoe. But we find by wear the nails grow loose, the wall broken, and in consequence the shoe comes off; and the result has been abandonment of it: if it could be made to answer it would prove one of the greatest advantages the veterinary art ever derived. The rivet also at the toe from wear was found to give way; but this appears to have been remedied by the concealed double rivets. There are other shoes: Mr. Moorcroft's—some say Mr. Clark's of Edinburgh—the seated shoe; but we must go no further into this subject; it will come in future lectures. There is perhaps but little merit after all in these various shoes; the great consideration being that the foot is properly prepared, and you do not lay the shoe against the sole: many of these shoes owe their good qualities to doing no harm. Perhaps the very best of these is the high-heeled shoe, which is to be applied in cases of lameness—in sprains, spavins, wounds, &c. it is to the horse what laying up the arm in disease is to a man. No pack of hounds should ever go out without such a shoe: by various accidents a horse might be disabled; when, with this shoe, he could walk home.

In cases of flexed joints, not anchylosed but out of the power of the animal to extend, (and when, did the same thing occur in the human subject, amputation must be practised,) Mr. S.

has given complete relief, and rendered a useless member very tolerably useful, by dividing the flexor tendons, the limb being first paralysed by cutting through the nerves.

Several Members have distinguished themselves by the introduction of remedies. Sulphate of Zinc in solution is strongly recommended by Mr. Newport in quittor, in place of employing the cautery and the violent caustics which do so much harm: Mr. S. has found it very effectual. Mr. Wright, of — in Norfolk, has used Hellebore with the greatest success in *chronic* diseases. He does business for Mr. Coke of Norfolk. He appears to have unravelled the secret in regard to its effects:— *viz.* that he never exhibits it until the animal has been well purged, and then he gives it without danger of inflaming the stomach and intestines, by which it has in some instances proved fatal. Mr. Percivall has praised it as being useful in lowering the pulse, remitting it if you find that it does harm. We have made trial of it without observing the same effects.

Within the last four years Mr. S. has been enabled to add to the stock of veterinary discoveries by adding a remedy for the glanders. "Although there are practitioners that condemn this, more," says Mr. S. "bear me out: I have a horse that has been cured, now, four years. Many of the Profession have attempted to accomplish this by the medicine in the solid form; but the same quantity which, so given, would inflame the stomach and bowels and destroy the animal, may be exhibited innocuously in a state of solution; and it succeeds best when the solution contains some mucilage, as gum arabic." As a general dose Mr. S. recommends ʒvi. dissolved in a quart or three pints of fluid. He commonly suffers the animal to drink before, and some with advantage also allow him to drink after, the exhibition of the medicine. Given in this mode, the copper is not found to nauseate the animal or take him off his appetite. In fact, the secret (if there be any) consists wholly in giving the medicine in a fluid instead of a solid form. The old, diseased, or emaciated subject Mr. S. seldom makes any attempts on. He could decide in the dark whether a horse affected with glanders was curable or not, and by the pulse alone. If it was 45 in a minute Mr. S. would say that the subject had diseased lungs: he can also tell by the pulse whether the lung is hepatized or not.

Another state of lung, besides hepatization, is the tuberculated. Here is a specimen of the miliary tubercles. *(Showing a drawing.)* These little tubercles suppurate and by coalescence form large abscesses which discharge their contents through the bronchia: the horse is then considered as glander-

ed, and destroyed. In the early stage, even of this condition of lung, Mr. S. has no doubt many would recover. This suppuration goes on to become very offensive and fetid. He has endeavoured to ascertain whether the matter taken from one of these tubercles would produce disease by inoculation: and he finds that by tuberculous matter he can as certainly produce tubercles as one potatoe will produce another. Asses inoculated with such matter have had tubercles produced within their lungs in the space of five days; and he knows this for certain, because it is a very rare occurrence to meet with an ass with tubercled lungs. Mr. S. believes the lungs to be the seat and origin of glanders; and the affection of the nostrils to be secondary.

Here is another specimen of morbid anatomy. In examining the left ventricle of the hearts of horses and other animals that have died of hydrophobia, Mr. S. has invariably found a large coagulum, forming an ecchymosis, adhering so strongly to the substance of the heart that we may tear it: this has not been noticed that he knows of; although it is not confined to these cases; it may be seen in all subjects dying suddenly and violently with strong pulsations of the heart.

Within these four years Mr. S. has made also another discovery. The nature of stringhalt, concerning which he made inquiries when on the Continent, but could obtain no satisfactory account. Some place the disease in the muscles, others in the spine, others in the nerves. Mr. S. finds it in the triceps adductor muscle: a large cyst is formed within its belly, and through its cavity are passing the nervous trunks; the effect of which morbid change is the destruction of the fibrous or muscular structure. The muscle being able no longer to act, and the abductors in consequence having no antagonists, the limb is raised from the ground with a sudden jerk.

Mr. S.'s next dicovery is a muscle that has not been described by writers on anatomy—a muscle running across the trachea. The bronchial tubes also possess this muscle; but in them it is less distinct, so that in truth the lungs are not only cartilaginous and membranous, &c. in their structure, but are also muscular.

Mr. S. finds that the causes of roaring and broken wind are now as demonstrable as any disease of the foot. That the former does not consist, as was believed for many years, in a band of limph across the windpipe, but mostly has its seat in the rima glottidis; though there are cases of contractions of the treachea, shrunk muscle, &c.

"On Tuesday," concluded Mr. S. "I shall have the pleasure of meeting you again. But, before I leave you, I beg to say,

that should there be any gentlemen who may have entered to my lectures last season and have not derived from them the information they were led to expect, it will give me great pleasure, on application, to return them their entrance-money."

THE ANATOMY OF THE HORSE.

By WILLIAM PERCIVALL, M.R.C.S.—V.S.

SECTION I.—*Osseous System.*

OF THE SKELETON.

THE SKELETON is the simple, jointed, bony frame, divested of the soft parts and dried. There are two kinds :—

1. *The natural skeleton* is that in which the bones remain attached to each other by their natural connections, denominated *ligaments*.

2. *The artificial skeleton* is made by separating the bones from all their connections, by macerating or boiling, and afterwards joining them again in their natural order and relative position, by wire or other means, so as to imitate as nearly as possible the former one ; over which it possesses the advantages of cleanliness, distinctiveness, and more or less artificial mobility of the joints.

Construction. Leaving the head and neck out of consideration, the entire frame will be found to come with sufficient proximity within the limits of a square, formed by drawing perpendiculars, touching the extreme parts before and behind, from a horizontal line level with the surface of the ground, to another parallel to it touching the summits of the back. A line extended perpendicularly through the middle of this square, divides the frame into two nearly equal parts, and falls upon the ground (represented by the inferior horizontal line) equidistant from the four points of tread ; a line drawn in the horizontal direction through its middle, includes the trunk within the upper division of the square, the space formed by the limbs, as well as the limbs themselves, within the lower section. The limbs represent four columns supporting the body, the bones composing which, though many of them are obliquely placed, are found, on taking the aggregate of their directions, to maintain their bearing in lines parallel to the common centre of gravity, which

may be said to be represented by the perpendicular line extended through the middle of the square: the angular position of these bones renders their motions more extensive and facile, at the same time that they, so placed, present convenient and powerful levers for the operation of the muscles. Furthermore, the bones forming the limbs are, superiorly, lengthy and few in number; whereas, below the fetlock, they are small and consist of several pieces: the rationale of which is, that the long bones are well adapted for extent of motion; the short ones, for resistance and multiplicity of movements. The head and neck operate as a burden, in addition to half of the trunk, upon the fore limbs; although the hind limbs appear the greatest and most capable of resistance: this apparent incongruity is removed when we come to learn that the latter constitute the powerful engines of progression.

Of the multiplicity and variety of pieces or distinct bones of which the skeleton is composed, most are found to be double, or to exist in pairs; such are the ribs, most of the bones of the head, and all those of the limbs: there are however several single bones; and these may be regarded as the key-stones of the fabric, being in reality the media through which the two lateral halves of the skeleton (composed of the bones in pairs) are united together into one entire structure. In this arrangement, the symmetry of the whole is preserved most completely, even as completely as if every bone had had a fellow; since both sides of the single bones exactly correspond.

The bones so far influence and determine the form of the soft parts that in very many (perhaps the majority of) instances, the animal is recognised in the appearance of the skeleton; in other examples however this is not so remarkable; in all the resemblance can be traced only in certain parts. In general, the head, chest, and legs—below the knees and hocks, present striking outlines of the same parts in the living animal; whereas, the neck, loins, arms, and haunches, have few or no points of similitude.

Division. THE SKELETON is composed of 238 bones, and is divided into *trunk, head,* and *extremities.*

THE TRUNK is subdivided into *spine*, *thorax*, and *pelvis.*

THE HEAD comprises the *cranium* and the *face.*

THE EXTREMITIES are four in number: two *fore* and two *hind.*

TABULAR ENUMERATION OF THE BONES.

TRUNK.

SPINE.

Cervical Vertebræ	7
Dorsal Vertebræ	18
Lumbar Vertebræ	5
Total	30

THORAX.

Sternum	1
Ribs, 18 on each side	36
Total	37

PELVIS.

Ossa Innominata	2
Sacrum	1
Coccygeal Bones, varying from 13 to 18	15
Total	18

HEAD.

CRANIUM.

Frontal Bone	1
Parietal Bones—*pair*	2
Occipital Bone	1
Temporal Bones—*two pairs*	4
Ethmoidal Bone	1
Sphenoidal Bone	1
	10
Bones of the Ear: Malleus, Incus, Stapes, Obiculare	4
Total	14

FACE.

Upper Jaw (Pairs)	Nasal Bones	16
	Superior Maxillary Bones	
	Inferior Maxillary Bones	
	Malar Bones	
	Lachrymal Bones	
	Palatine Bones	
	Superior Turbinated Bones	
	Inferior Turbinated Bones	
	Vomer—*single*	1
Lower Jaw		1
		18
Teeth		40
Os Hyoides		1
Total		59

EXTREMITIES.

FORE.

Scapula, Humerus—*Shoulder Bones*	2
Radius, Ulna—*Arm Bones*	2

Bones of the Knee.

1st. Row.	Scaphoid	2nd. Row.	Pisiform
	Lunar		Trapezoid
	Cuneiform		Os Magnum
	Trapezeum		Unciform

8

Large Metacarpal Bone, 2 Small Metacarpal Bones—*Leg Bones*	3
Sesamoid Bones—*Fetlock*	2
Pastern Bone	1
Coronet Bone	1
Coffin, Navicular—*Foot Bones*	2
Total	21

HIND.

Femur—*Haunch Bone*	1
Patella—*Stifle Bone*	1
Tibia, Fibula—*Thigh Bones*	2
Astragalus, Os calcis, Cuboid Bone, 3 Cuneiform Bones—*Hock Bones*	6
The bones below the hock correspond in name and number to those below the knee, *viz.*	9
Total	19

Extracts from Foreign Journals.

INJECTION OF MEDICINES INTO THE VEINS.

By M. Dupuy.

LONG intrusted with the teaching of materia medica, *(raisonnée,)* or, what Bourgelat styles, the science of indications, I have anxiously sought every means to simplify it and free it from a multitude of medicinal substances handed down to us from old traditions in the works of the present day, and which but for them might have had their virtues (but too often manifesting contrarieties) put to the test of accurate observation. With this view, I have practised numerous injections into the veins of animals: a mode of administration eligible for its simplicity, since only such medicines can be used as are soluble in water, the common vehicle in the pharmacy, and since it admits of greater precision in determining the part subject to the medicinal influence; an influence modified by a variety of circumstances when the medicine is administered through the ordinary channels.

I have observed also that medicines injected into the veins in a state of solution, even in very small doses, exert a quicker and more intense effect. Aloes, which requires from 18 to 20 hours to take effect within the bowels, operates immediately when injected. In many cases, those, for example, of distention of the stomach, the administration of drinks, even the mildest, excite alarming convulsions, the consequence of which is often rupture of that viscus. Here injection would be the preferable mode.

With a view of coming at the action of the medicine itself, and not confounding it with the effects of the water, M. Dupuy very properly sets out with the injection of plain water, first raised to the temperature of the body. His method of proceeding is this. The jugular vein is opened with a common phleme, as in bleeding; a canula or pipe with very contracted orifices is introduced in a direction downwards—towards the heart, and maintained therein by an assistant; the syringe containing the liquid is then applied, and the injection is slowly and cautiously conducted. Afterwards the wound is pinned up as after bleeding.

May 27th, 1826. Eight pints of warm water were injected into the veins of a young glandered horse. Immediately re-

spiration and circulation became greatly accelerated and embarrassed: the pulsations of the heart violent and distinctly audible on the left side; the submaxillary artery tense, pulse small; all the subcutaneous vessels distended; but as the plenitude of these vessels increased, the artery became more compressible; the heart's action less violent; the conjunctive and other mucous membranes pallid. Two hours after the injection, the animal grew dull, though his respiration continued short and accelerated; he cast looks at his flank, and was up and down like a horse with gripes. Urine abundant and very dark coloured. A small bleeding seemed to relieve him. The blood coagulated almost immediately; and was covered with a buffy coat which pervaded three-fourths of the mass. The symptoms gradually subsided, and eight hours afterwards the animal had perfectly recovered.—28th. Ten pints were injected, which produced similar but less marked derangement.—29th. Twelve pints were introduced, with same result.—30th. The injection was augmented to fifteen pints. The animal staggered and with difficulty walked into his stable. Here he lay down. Four hours afterwards however, after having staled copiously, he appeared quite well again.

Similar results to these, which it is evident present nothing to alarm us, have attended the same experiment practised on several other horses, *viz.* Quickened respiration and circulation; slight colics and vascular turgidity;—yielding to moderate bloodletting, copious urinary evacuations, and increased pulmonary exhalation.

June 2. M. Dupuy injected twelve pints of warm water containing in solution grs. xij. of subcarbonate of ammonia. This seemed to cause more and longer continued uneasiness, but not essentially to vary the symptoms.—6th. The same injection was repeated; but more with a view of discovering what effect it might have on the disease (glanders) the mare had; and it turned out that the swollen submaxillary glands, the nasal discharge, and the ulcerations of the membrane had disappeared in the course of the experiments.—10th. She was bled to death.

Examination. Adhesions between the vaginal coverings of the testicles; kidneys infiltrated with a reddish serum; urinary canals enlarged; mucous membrane of the stomach turned brown; lungs emphysematous, their inferior border presenting incipient white hepatization, superior border tuberculous, besides many little cysts throughout their substance; incipient adhesions between the pericardial and costal pleuræ; left lung marbled, brown and black (ecchymoses); interior of the

ventricles of the brain injected, as was also the spinal marrow; the membrane lining the frontal sinuses and ethmoidal convolutions highly injected; the nasal meatus dilated; the inferior cornu of the left nostril, as well as the membrane itself, presented some superficial ulcerations; the lymphatic glands of the throat and breast were pale but firm; the par vagum palely reddened.

ANEURISM OF THE AORTA.

ON the 31st of August, 1826, a mare was brought to the College at Alfort, very lame from a sinus in the foot, between the frog and sole, two inches deep, running in a direction backwards, from which issued a black, fetid, purulo-sanious matter. This was attended with fever, for which she was bled. The next day it was discovered that the long flexor tendon was perforated; and that synovia was escaping. This was followed by sloughing of the tendon and exfoliation of the navicular bone. The foot was poulticed and fomented, and bound up with tow: the bloodletting was twice repeated, and acidulated mucilaginous drinks and some clysters were administered.—On the 20th September, the case continuing unrelieved, while in the act of dressing the foot, the animal suddenly reeled, tossed up her head and fell. No sooner was she down than her nostrils, and the muscles about the breast and abdomen, were convulsed by alternate contractions and dilatations; her limbs stretched out, and the eyes rolling within their orbits. The jugular was instantaneously opened: only drops of blood issued. Death, in the very act, closed the scene.

Examination. The pericardium prodigiously distended with coagulated blood, assuming the form of the exterior of the heart, and looking altogether like hypertrophy of that organ. The coagulum weighed 5lbs. The trunk of the aorta at its base was ruptured to the extent of its circumference: and the rupture was evidently the result of attenuation of the vessel. Within the right ventricle, one of the chords passing from the side to the septum, was found as large as a goosequill, and entirely fleshy.

The synovial lining of the navicular joint was reddened, and

the cavity full of an extremely fetid yellowish pus, which had even insinuated itself beneath the flexor tendon. The navicular bone exhibited caries of its articular surface.

WOUNDS INTO JOINTS.

By M. Corroy, *Veterinary Surgeon to the Royal Depôt of Stallions at Angers.*

WOUNDS penetrating the cavities of joints are not only among the most frequent cases of serious accidents to which the attention of the Veterinarian is called, but are those that interest him most, whether it be from their nature, or from their neglect by the owner of the animal, who, deceived by their aspect, seldom sends for medical aid until the consequences are such as to render recovery arduous, or even impossible. Under these considerations the following remarks will not be read perhaps without interest.

Case I. In March, 1821, a mare, the property of the Count of Az—, while breaking in a cabriolet, set a kicking and received a wound on the inside of the right hind fetlock, near the flexor tendon. I was called five hours after the accident. The engorgement was considerable and extended above the hock; the limb was raised from the ground in acute pain; pulse full and hard: the wound, two lines in breadth, penetrated the joint obliquely, from behind forwards and from above downwards, and the joint-oil flowed every time the limb was moved.

Bleeding, bathing, and emollient poultices were at first employed to allay the inflammation, which did not begin to decline until the animal became suspended. Although the tumefaction diminished, the issue of joint-oil continued, the wound was plugged with lint dipped in tincture of aloes, and the fomentation and poultices continued.—On the 20th day the animal walked sound. Still there were occasional eruptions of synovia. She was now turned loose into an inclosed but unpaved yard. Under a continuance of these means the wound speedily closed, and the mare perfectly recovered.

Case II. In August, 1823, a mare belonging to M. Boutton, at Angers, in crossing a slated drain, slipped and fell with her hind quarters in the ditch: she raised herself with great difficulty; and in her struggles to accomplish it ran a flint into the left hock, about half-an-inch to the outer side of the

saphena vein. Being called a few moments after the accident, I probed the wound; which I found to be eight lines in breadth, and to run in a direction from without inwards and from above downwards, among the tarsal bones. Inunctions of the hock with poplar ointment and emollient fomentations allayed the consequent inflammation. Lint plugs soaked in tincture of aloes, and introduced into the wound, diminished by degrees, effected a perfect restoration in twelve days.

Case III. A broken knee and open joint. Treatment and result similar to the foregoing.

Case IV. A horse, the property of M. Bertin, postmaster at Angers, had been lame for a long time of the off hind leg without any discoverable cause for the lameness, when a fistula made an eruption in the middle of the bend of the pastern. The probe extended across the joint, as far back as the sesamoidal groove.

I operated as in a case of quittor, removing the cartilage and the ulcerated portion of the capsular ligament. The joint was open for the extent of an inch; the treatment was the same as that for quittor; and at the expiration of three months the animal resumed his work in the diligence, feeling nothing more than a little stiffness, which increased with fatigue.

Case V. A mare drawing a cart stumbled, and was near falling upon a heap of angular flints. The off knee became broken, the skin destroyed, and the joint opened, giving escape to synovia. A farrier, who was called in, applied some aromatic lotions, rubbed the knee with spirits of turpentine, and introduced into the wound plugs of lint wetted with the same. Twelve days afterwards the tumefaction became considerable, and the animal made no use whatever of the limb. At this stage I was consulted. I found the knee and cannon almost bare from the frictions: and the whole limb highly inflamed and swollen to double its natural volume. The knee felt hard and was very sensitive; synovia issued from the wound, but it was impossible to direct the probe into the joint in consequence of the sinuosities of the passage. Bleeding, fomentations, and emollient poultices dissipated in a few days the surrounding tumefaction; but the carpal bones became a prey to very active inflammation, and in spite of remedy turned carious. The animal was destroyed. I was not able to make any examination of the parts.

Under the treatment which I had already found so successful, this mare would probably have been saved; but the case, as it stood, only furnished me with a fresh proof of the utter incompetence of farriers and quacks, but too often called to treat such

accidents. They abuse the confidence gratuitously reposed in them, and offer a still greater insult to veterinary medicine and agriculture, insomuch as their ignorance impels them, unhesitatingly, to the adoption of the most pernicious treatment; instead of seeking the advice of the educated man, until the disease has made such progress as to baffle even all his means of restoration. *Jour. de Méd. Vét. et Comp.*

STRANGLES SUCCEEDED BY LOCKED JAW.

By M. Durand, *Veterinary Surgeon to the Train of Artillery of the Royal Guard.*

A Bretonian horse, brought up in Normandy, adapted for draught, and four years and a half old, while at grass in the month of May, 1821, during cold wet weather, suddenly showed on the 1st June to have the strangles, by a considerable swelling under the throat. On being taken into the stable, the same day, his symptoms were—a lounging walk; head hanging down; slight tremors; coat staring; mouth dry; no appetite; pulse hard and full; mucous membrane of the nose dry, very red and inflamed; cough; eyes watery; though his food had been green, the dung-balls were small and hard.

Treatment. Small bloodletting from the jugular; basilicum ointment rubbed under the throat; honey; clysters of warm water.

Regimen. Wheaten straw, water-gruel with honey and nitre; warm temperature and clothing—sheep-skins.

This was followed by a discharge from the nose of a fluid at first clear, but which subsequently became white, abundant, and consistent: the swelling remaining soft and but little sensitive. (Cantharides added to the basilicum.) After several such applications, inflammation was established and abscess formed.

June 7th. Tumour opened, giving vent to a large quantity of laudable pus.—The same regimen continued. Dressing, tow in small pledgets.

10th. Two other tumours have appeared upon the sides of the head; pulse feeble and quick; eyes fixed; mouth dry; difficulty in moving the jaw; slight nasal defluxion. (Extract of juniper added to the honey.)

16th. Tumour opened with the bistouri. Pus abundant,

and the same in appearance as in the submaxillary abscess. The incisions readily cicatrise.

From 20th to the 25th. The jaws continued to lose their mobility, which has ended in complete *trismus*. The tongue however retains all its activity. The left cheek has become swollen and painful, the eyes brilliant and starting, the nasal flux diminished, the pulse but little accelerated; the animal loses flesh, though his hide remains supple and loose; his appetite is sufficiently marked by the desires and inquietude he expresses at the sight of food.

An epispastic pommade, composed of laurel ointment and cantharides, to be applied to the temples and cheeks; emollient fumigations directed towards the head thrice a day. The horse was nourished with gruel out of a bottle, thickened with flour and barley meal. He was kept warm, and was walked out a little whenever the weather permitted.

After some days, with such treatment, a rasp could be passed into the mouth between the teeth, if tried after the fumigation. By degrees the jaw began to recover its mobility; towards the 15th July, the horse could eat hay cut into chaff, and also bruised oats. And as the jaw recovered its freedom, the limbs grew fine, the flanks relaxed, and his *embonpoint* became restored. *Jour. de Méd. Vétér. et Comp.*

QUITTOR.

Reflections on the Curative Means proposed in Cases of Caries of the Lateral Cartilage. By M. Renault, *Veterinary Surgeon.*

QUITTOR has been regarded by all veterinary writers on the subject as one of the most serious evils to which the foot of the horse is liable; but they are by no means agreed how it ought to be treated. I am not going here to enumerate the different methods proposed, for such a fastidious proceeding would prove in no way useful; I shall confine myself to the two methods of cure which divide the opinions of the greater number of Veterinarians, to the end that I may investigate their respective advantages.

The most ancient is that detailed by Solleysel, in his *Parfait Maréchal,* and which consists in the use either of the actual or potential cautery; occasionally, of both together. The other was first practised by Lafosse, senior, and, as described by his son, consists in the extirpation of the diseased cartilage.

The first was almost wholly abandoned by Veterinarians at the time M. Girard's work appeared on Quittor: a work replete with judicious reflections drawn from interesting facts in favour of the utility of corrosive sublimate, and one that has received an interest commensurate with the importance of the subject and the deservedly celebrated name of its author. Henceforth, this method attracted numerous partisans: many Veterinarians returned to the employment of corrosives, and the publication of the success resulting therefrom attested the additional service rendered to animal medicine by the Director of the Alfort School. This was attended however with what commonly happens when any meritorious individual furnishes an idea susceptible of extension: M. Girard endeavoured to rescue from oblivion a measure which, in skilful hands, would prove successful; he strongly recommended the substitution of it for a painful operation, one that was often succeeded by unexpected and serious evils, and occasionally by a tedious and imperfect recovery. But his views were misconceived: some, who adopted his mode of treatment, magnifying the asserted advantages of it, fell into a system of exclusion ever injurious to a science yet in its infancy. In a Number of the *Recueil de Medicine Veterinaire*, M. Bareyre asserts, *that caries is not curable, neither by cauterization, nor by corrosive injections;* and farther on, *that in quittor, corrosive sublimate may with advantage be substituted for the operation.* I shall have occasion to discuss the validity of these propositions, which, to say the least of them, appear extremely hazardous.

On the other hand, the partisans of Lafosse's procedure, discomforted by some instances of failure wherein caustics were employed, proclaim the total insufficiency of a mode of treatment, which probably they have not put twice to the test, and persist in the belief that the only remedy is the extirpation of the cartilage.

This unhappy discordance all arises from want of a mutual understanding: I am persuaded that if the espousers of one or other opinion had directed their attention to the facts from which they respectively argued, if they had remarked the particular spot where the cartilage proved carious, if they had noted the depth and direction of the sinus, and then had connected these observations with the structure of the diseased tissue, they would have agreed that each of these modes of treatment was judicious, depending on the inroad made by the disease, and also on the situation of the caries. My own practice, superintended at the commencement by my father, a man of twenty years' experience, in a country wherein these maladies are haplessly but too frequent; my residence at the Alfort

School; and my extensive acquaintance with Veterinarians; have afforded me opportunities of collecting cases of a very conclusive and convincing nature, some of which may not prove uninteresting here.

Case I. In November, 1824, a milkman of St. Leu-Taverny wished my father to visit a large cart-horse, lame of the near fore leg. Myself a pupil at the time, and it happening during the vacation, I accompanied my father. According to the owner, a month ago this animal fell in harness, and one of the shafts slightly bruised the outer side of the coronet and occasioned a trifling swelling. The animal at this time became lame, but had recovered and continued sound for fifteen days; when, after a journey to Paris, the lameness returned. All tumefaction had disappeared; but a sinus now existed in the side of the coronet, level with the anterior border of the cartilage, which was straight and deep and took a direction backwards. My father conceived that the operation was indispensable. However, I mentioned to him the procedure recommended by our Director of the College, and he determined on making trial of it. Being unable to procure in the village what was necessary, we returned the following day and proceeded with the application of sublimate, punctiliously adhering to the principle of M. Girard. The sinus had been previously dilated with the actual cautery. The separation of the eschar, which took place twelve days afterwards, exposed to view at the bottom of the sinus a greenish slough about the size of a small pea, which was easily extracted with the forceps. Eighteen days from this, the sinus, undiminished in extent, had become straight again, and a greyish matter issuing from it showed that the caries still remained. The operation was now had recourse to; and, fifty-five days afterwards, the horse returned to his work. I had left home when the operation was performed, so that I did not myself see the cartilage; but such was the result communicated to me by my father. I have had occasion since to visit the same horse: his foot is without any visible deformity, and he continues his work from St. Leu to Paris perfectly sound.

Case II. In the autumn of 1826, a farmer of Frépillon, a village near Pontoise, showed me a little bat-horse he had recently purchased. The animal had a small wound upon the inner side of the near hind coronet, which was situated about opposite to the middle of the base of the cartilage. In the centre of this abrasion I discovered a fistulous opening, admitting the probe to the depth of five or six lines. Having first assured myself of the caries of the cartilage, I insinuated a cone of sublimate down to the very bottom of the sinus, and secured it there with the aid of tow and ligature. The slough

did not separate until the fifteenth day. The sinus continuing daily to increase in depth, and the pus issuing from it retaining its unhealthy character, I renewed the application of the sublimate, taking special care that it reached down to the caries. On this occasion, the slough separated on the 11th day; but the suppuration continuing, without any indication of amendment, I resolved on the removal of the cartilage. The sinus took a direction in an oblique line from above downwards; its extremity, though the caustic had reached it, presented a bright green aspect, and the cartilage there was hardly thicker than a shilling. The horse resumed his labour seven weeks after the operation: a sound horn grew over the wound, and he showed no lameness, even upon the *pavé*. He died in July of the following year, of stomach-staggers.

Case III. In April, 1826, Louvet, a carrier, brought me a four-year-old horse that had been recently cured of poll-evil. According to his notions, the humour expelled from the poll had descended into the foot. I found a sinus running from the external part of the heel of the near fore leg, which being large and not deep, enabled me to detect *the green hue*, the pathognomonic sign of carious cartilage. I introduced a piece of sublimate proportioned to the diameter of the opening. At the second dressing, which took place fourteen days afterwards, the slough having then come out, a vermillion surface was exposed, covered by a thick laudable pus. In this condition, the animal having lost his lameness, the owner, who was about to set out on a long journey, wished to take him along with him: I enjoined the necessary precautions. I was informed three months afterwards, on the return of Louvet, that the horse had been tied behind the waggon for the first three or four days of the journey; after which he resumed the collar, and worked on without showing any inconvenience. At this time the cicatrix was scarcely visible.

Case IV. In June, 1826, I was called to look at a fine horse belonging to M. Furier, postmaster at Pontoise. A sinus several lines in extent pervaded the outer heel of the hind leg; which only occasioned lameness in the trot upon the *pavé*. Being near to a farrier's shop I had recourse at once to an iron pointed and heated to whiteness. I anointed the surrounding parts with poplar ointment, and covered the whole with dry tow. Twenty days after this, the animal worked at a foot's pace; and at the expiration of five weeks was driven in the diligence.

Case V. M. Lebas, salt-petre manufacturer at Pontoise, sent for me in January, 1826, to look at a stout harness horse, lame of the near hind leg: the external side of the coronet was

hard, tumid, and very painful, but there was no discoverable lesion. (Fomentations, emollient poultices, rest.) The animal recovering his soundness, although the tumefaction remained, was put to work again. Lameness however was reproduced, and I was called on to revisit him. I found matter exuding amongst the hair; a swelling rising into a prominence upon the coronet, fluctuating at several points: and the horse hardly able to rest any weight at all upon the limb. I hesitated not to remove the cartilage: it was almost entirely separated from the subjacent tissues by a considerable collection of greyish matter, very thin and little odorous. Its substance showed no signs of caries, but the surface was merely softened in several places: the capsular ligament was opened in the operation. The issue of synovia ceased at the third dressing; and notwithstanding this accident the horse was put to light work, upon soft ground, five weeks after the operation. In the beginning of the third month, the wound was wholly covered with sound horn, and scarcely any trace of the operation was discoverable.

Let us now turn our attention to the anatomical structure of the lateral cartilages of the foot, and see if that will furnish us with reasons why the corrosive sublimate has not been equally successful in all the foregoing cases. This inquiry I trust will prove that such different results from the same cause might have been apprehended, if not foreseen; since they are but the natural consequences of the organization of these cartilages, which will be found not to be alike in every part.

Repeated examination of it anteriorly and towards its base, only goes to confim its similarity to other cartilages, properly so called: it is white, flexible, frangible, and homogeneous. As we approach the borders and the posterior part, it loses its homogeneous characters: it is no longer frangible; and in being rent discovers a fibro-filamentous texture. Still more posteriorly, the fibro-cartilaginous organization is more manifest, and here, on an attentive view, seem to exist isolated cartilaginous knobs, surrounded by substance entirely fibrous. Lastly, the extreme posterior end is fibro-adipose, and is confounded with the fatty frog. Now, if we recall to mind—1st. that the cartilaginous tissue possesses but in a very low degree the vital properties; (contractility, sensibility;) 2dly. that inflammation excited within it by external irritation, proceeds very tardily and commonly ends in caries; 3dly. that caries spreads so long as any continuous cartilage is left—it will not be difficult to explain the first part of the problem. For instance, admit that caries is already established within the anterior part, or in the base, of one of the lateral cartilages: the mortified spot in such tissue will communicate irritation and consequent caries to all

around it. If, with a view to cut off this contamination, we destroy the carious spot with the iron or some caustic, we produce another kind of irritation, which, *in the majority of cases,* also ends in caries, even prior to the separation of the slough; or else, should the slough first be detached, the cartilage, not being from its nature capable of granulation, and in consequence exposed to the air, speedily takes on inflammation and caries, and we have all our work to do over again. And there will arrive a time even when one cannot employ cauterization without danger; when the caries has destroyed the cartilage down to the capsular ligament which it covers, or when the cartilage has become so attenuated that the caustic can no longer separate but a thin pellicle from it. What is to be done under such circumstances? It seems to me not to admit of hesitation: the cartilage is the carious part; it must be removed; and especially may be since the operation does not render the horse so useless as has been represented.

The two first cases clearly demonstrate that this theory is not built upon specious reasoning alone: it harmonizes with the facts; it arises out of them. In both these horses, caries existed anteriorly to any treatment; which accounts for the inefficaciousness of the sublimate; even though in one case applied a second time: the operation therefore became indispensable.

If, on the other hand, the sinus is situated in the heel, as in the cases III and IV, although the fibro-cartilaginous tissue is carious, yet, there being here demonstrable cellular tissue, we can conceive the part capable of an eliminatory inflammation: and we shall with more reason look for this, should one of those cartilaginous knobs, surrounded by fibro-cellular tissue, happen to be the seat of the caries. According to this, the solution of the second part of the problem becomes equally obvious; the salutary effects of the caustic and iron being explicable as follows:—In destroying parts contiguous to the caries, a slough is produced the same as in cauterization of caries in the anterior portion of the cartilage; but an effect that cannot follow there, is produced here, in this more vascular tissue: the character of the inflammation becomes changed, it assumes the suppurative form; granulations arise (though tardily) underneath the slough, which is elevated and detached by the pus; and the wound, now a simple one, speedily cicatrises.

There are even instances of spontaneous cures of carious cartilage of the heel. One occurred this very year at the Alfort School. The subject of it was placed under the care of pupil Leroy; the actual cautery had been tried twice; caustics another time; but the caries remained. The horse halted and suffered greatly. Nothing but emollient poultices were applied,

when, some time afterwards, he perceived a greenish slough protruding, about the size of a large pea. This was followed by cicatrization of the wound, and the horse was restored sound to his master.

After what has been advanced, one would scarcely believe that M. Bareyre could have settled this question so peremptorily in favour of one of these two methods; and particularly as nothing appears in the three cases he has related to warrant such an inconsiderate decision. But what surprises me still more is that this veterinarian has gone so far as to assert "that almost invariably after the operation, the animal becomes lame for life; even in the most simple cases, and when the operation has been performed under the most favourable circumstances and with the greatest dexterity." What can have induced M. Bareyre to depict the operation in such dismal colours? I do not pretend to answer this query; but I can assure him, that of above thirty horses which I have operated or witnessed being operated on for quittor, a very small proportion remained lame. Among others, I may draw his attention to Butholle's horse, a plasterer, at Courdimanche, from whose foot my father removed, in my presence, not only the cartilage, but even the sole and a portion of the coffin bone, which had been fractured. Three months after this, the same horse underwent the operation for quittor, which had been produced in the opposite cartilage by tight ligatures. Notwithstanding all this, the animal got quite sound, and works in harness at this present day. Lest my own particular cases should appear to M. Bareyre unsatisfactory, I will remind him of a case related at the end of his own work by M. Gerard, Veterinary Surgeon of Artillery; who says, "for these last ten years, at least, every horse on which I have operated for quittor has gone with the diseased foot unshod *until he was perfectly recovered;*" which certainly must mean that the horses became sound. I might also quote cases from the Dictionary of Hurtrel d'Arboval, in further confirmation of this.

M. Renault thinks he has established the following general positions:—

1*st*. That it is an error to suppose that, *in all cases*, caustics are preferable to extirpation.

2*nd*. That extirpation ought to be adopted,

A. Whenever the anterior part, or the base of the cartilage, is the seat of the caries.

B. Whenever there is a sinus in the heel, penetrating very deep and running forwards.

C. Whenever the cartilage, although itself healthy, is isolated by suppuration.

3*rd*. That our practice ought to be restricted to caustics and the iron whenever the caries is confined to the superior border or posterior extremity of the cartilage, and whenever the sinus does not run deep. *Jour. de Méd. Vétér. et Comp.*

There is a Paperon the same Subject in the Journal Pratique de Méd. Vétérinaire for September, by CHARLES PREVOST, *Veterinary Surgeon at Geneva; wherein he informs us—*

THAT quittor is by no means frequent in his part of the country; at least that down to the present time he has attended only ten cases of the disease. That of these cases—Five were cured by extirpation of the diseased parts; three by the method practised by the ancients, and recently revived by the Director of the Alfort School: *viz.* the application of caustic to the carious part; one by cauterization; (alone;) the tenth resisted both caustics and cauterization, and was not permitted to be subjected to the operation of extirpation.

After briefly detailing these ten cases, M. Prevost concludes by saying he is of opinion—

1*st*. That Girard's method is the least painful, the most expeditious, and that which leaves behind the least consequent disorganization. At the same time he agrees with Girard in considering the practice inapplicable in those cases in which the quarters or heels are in a state of suppuration, the sole under-run, the base of the cartilage and the coffin bone carious.

2*dly*. That the removal of the quarter and entire extirpation of the lateral cartilage, though a nice and difficult operation, is not to intimidate us: supposing it to be skilfully performed, the first two dressings* being all that require further care. Well-applied and uniform compression is very essential; and it may be most conveniently effected with tape broader than is commonly used. The first dressing ought not to be removed until the fifth day in summer, the seventh in winter; the second, on the fourth or sixth day, depending on the season. I take particular care to make the border of the crust next to the wound as thin as possible, and to weaken it so above that it leaves but a thin edge. I do not know that I have any right to ascribe my success to these little precautions; but my cures have invariably been complete and unattended with deformity of the hoof: at all events these little attentions cost us nothing, and, if effectual at all, must contribute to restoration.

* Pledgets of tow soaked in some spirituous stimulant,—tincture of aloes, wine, brandy and water, &c.

A SUMMARY ACCOUNT OF THE DISEASES OF THE HOOFS OF SHEEP.

PROFESSOR STONIG has published the result of his researches into the nature of these foot-maladies, including their symptoms, diagnostics, causes, and treatment. He makes three divisions of them:—sporadic, epizootic, and contagious diseases. The sporadic affections have their origin in external injury, from any pointed or gritty substance that may penetrate the horn; or else in excessive growth of hoof, which by inflection at the toe interferes with progression. In these cases, the removal of the cause is in general all that is required: should inflammation however have been excited, the foot may be immersed in cold water or snow, or the horn cut away until the blood comes; which is to be suffered to stream in sufficient quantity, and the wound afterwards bound up with tar.

In many flocks, every year, in the autumnal, winter, and spring seasons, several of the sheep become lame; an evil ascribable to the corrosive effects of exposure of the hoof to the constant moisture and muck of their habitations. Hoofs dry by nature, such as the merinos have, suffer most from this enzootic disease. The treatment consists in avoiding the existing causes as much as possible, and in paring the hoofs and afterwards sprinkling powdered blue vitriol upon the raw parts.

Another malady is the festered cleft—characterized by inflammation of the soft parts of the extremity of the foot, and accompanied by vesicular and suppurative eruptions. It is also attended with fever, and may be regarded as epizootic. In most cases this issue proves its own cure; though lotions of salt and water, and applications of tar assist the recovery.

It is often difficult to distinguish this last disease from a contagious affection, in some stages resembling it, named *rot*. This is a disease that appears to have been unknown in Germany prior to the introduction of merino sheep. It is decidedly contagious, and so in the true sense of the word—requiring *immediate contact*. The most approved remedies for it, externally applied, are—blue vitriol in powder, sulphuric acid mixed with oil of turpentine, diluted sulphuric acid, distilled vinegar, oil of turpentine, œgyptiacum. Any of these may prove serviceable after the hoof has undergone the necessary paring; but a compound from which the author has seen the happiest effects, is a mixture of two parts of tar and one of oil of turpentine, with one part of muriatic acid and four parts of finely powdered blue vitriol. The mode of preparing it, is to put the tar into a wooden or earthen vessel, add the turpentine slowly, stirring the mixture all the while, then the muriatic acid, and lastly the

blue vitriol. This application is not intended to be used until after the foot has been properly pared and cleaned; and it must be repeated so long as any disease remains. *Jour. de Méd. Vét. et Comp.*

HOVE.

HOVE, hoven, blown, are the terms vulgarly used to denote that distressing and dangerous malady to which ruminating animals, cows in particular, but sometimes oxen, sheep, and even goats, are subject, from gorging their paunches with luxuriant and growing succulent green-food, especially clover. It is a case, when it occurs, demanding immediate aid, should which not be at hand or fail to afford the required relief, the animal, after running or staggering about, wild and frantic with pain, precipitates itself upon the ground, and, overwhelmed with agony, becomes convulsed and dies. The immediate cause of all this distress being over-distention of the paunch with air, produced by the indigestion of the green food with which its cavity is crammed, the remedy, as every cattle-man knows, consists in making an opening into the paunch, such as will give free vent to its gaseous contents. Sometimes a common awl is used for this purpose; more commonly a pen-knife: the most convenient and effectual instrument is a trocar, similar, but longer, to the one employed by surgeons in tapping for dropsy.

M. Chretien, Veterinary Surgeon, at Vermanton (Yonne), has made some improvements in the construction of the canula of the trocar, having, as he says, experienced some inconveniences in the course of practice with the one in common use. This canula is made of tin, (silver would answer the purpose still better?) and is six inches in length, the diameter being the same as in others. The sides of the inferior third of the tube are pierced with twelve or fifteen small holes, which serve to give vent to the gas and frothy matters, in case the canula should be pushed against the alimentary mass, or some of these matters should gain admittance into its canal. A metallic plate, soldered to it externally, about the third of an inch below the superior end of the canula, defends the wound from the ejected matters; and through this two holes are punched, one above, the other below, to which the circular band is attached that retains the tube in its place: the band requiring tightening according as the distention of the belly becomes relieved. When the gas has made its escape, the mouth of the

tube is closed with a cork, to prevent the entrance of the external air; and five or six hours afterwards, providing no fresh gas is disengaged on the removal of the cork, the canula may be withdrawn. This precaution is useful in mephitic indigestions complicated with distention of the paunch; in which it is occasionally necessary to leave the canula in for several days, in consequence of a renewal of the fermentation. The wound should be covered over with a plaster of pitch mixed with common turpentine.

M. Chretien has constructed a similar instrument of less dimensions for practice on sheep and goats; although, as he justly remarks, to these animals the professional man is rarely called: still, such an instrument might prove highly useful in the hands of farmers and graziers; and those individuals who have large herds and flocks do not consult their own interest when they neglect to provide themselves with means so simple and cheap, which in the season of their being required, may turn out to be an invaluable life-preserver to their live stock in general.

Communications and Cases.

ON RABIES CANINA. *By* W. YOUATT.

(Continued from page 31.)

Post-mortem Appearances.

THE tongue usually swelled, discoloured on the dorsum, varying from a dark red to a dingy purple, more red mingling towards the point and edges. The large papillæ near the root of the tongue prominent. The sublingual glands generally enlarged, with appearances of inflammation; and the lesser glands under the membrane of the mouth likewise tumefied. I suspect that an occasional enlargement of these has been mistaken for pustules. No particular redness or engorgement of, or about the frænulum linguæ, whether the dog has or has not been wormed. All the glands concerned in the secretion of saliva increased in size and vascularity. Some inflammatory appearance extending over the arch of the palate, and the whole of the fauces. The tonsils enlarged, and sometimes considerably inflamed. I do not recollect a single case in which the tonsils have not been affected, and to this affection of the

tonsils, and probable deficiency of mucus to lubricate the passage to the throat, I partly attribute the insatiable thirst of the rabid dog.

Injection of minute vessels on the back of the epiglottis: sometimes merely a few ramifications; occasionally a beautiful net-work of vessels. When much injection upon the epiglottis the membrane covering the arytenoid cartilage is likewise vascular. The edge of the epiglottis is frequently thickened

Intense and never-failing inflammation at the angle at the back of the larynx, behind the epiglottis. The appearances presented by the trachea very uncertain, varying from the deepest inflammation, and that extending even to the bronchiæ, to a perfect freedom from unusual vascularity. The membrane of the bronchiæ occasionally highly inflamed, and the bronchial passages, and the lower part of the trachea filled with a viscid or bloody spume. But this, contrary to the opinion of some continental writers, comparatively seldom occurring and not characteristic of the disease.

In a few instances, inflammation of the substance of the lungs; more rarely, congestion; but very singular patches of inflammation on the pleuræ, and, sometimes, on the pleura of one lung only.

The œsophagus rarely affected; the stomach invariably. Vascularity and redness, in some cases confined to the rugæ, and not much exceeding the blush upon the healthy stomach during digestion; but more frequently descending between the rugæ, and occupying a considerable portion of the mucous coat. Confined occasionally to the cardiac portion, or more intense there; but, in a few instances, extending and with the deepest intensity over the whole of the stomach. Spots of ecchymosis, varying from the magnitude of a pin's head to that of a large pea, very generally, but not invariably found. They appear in a few cases, where the slight degree of inflammation would not warrant the expectation of them; and they never fail to accompany deep and general inflammation. These spots contain a central depression, often sinking deep into the coats of the stomach. A variable quantity of indigesta in the stomach; not the grass eagerly sought for by dogs in health, nor the bits of stick, or small stones, or pieces of coal, swallowed by puppies, during the period of dentition; nor the execrement eaten by some dogs, and particularly by spaniels under the influence of a depraved appetite; but a strangely mingled mass of straw, hay, hair, *horse-dung*, and earth. In some instances the stomach perfectly distended with these substances, which occupy even the duodenum and jejunum.

When no indigesta are found, there is a fluid resembling the deepest chocolate mingled with olive, and staining the mucous coat; or, still darker, like coffee, yet communicating no stain. When neither the indigesta nor the fluid appear, it will be discovered on inquiry that the dog has vomited much hair, hay, and straw.

The outer vessels of the stomach usually turgid.

If there be much inflammation of the stomach, it extends to the duodenum, and, occasionally to the small intestines; but in no case is there the slightest discharge of blood from the vessels of the mucous coat.

If the inflammation of the stomach be slight, the bowels are not affected.

The other abdominal viscera present no peculiar morbid appearance.

If much fever has attended the progress of the disease, the parietes of the ventricles of the heart exhibit the deep colour of carditis, and spots of ecchymosis are found upon the membranes lining the ventricles; but, in most cases, no vestige of disease can be traced in the heart.

The brain will usually display some vascularity of the membranes, particularly of the pia mater: the degree of this vascularity depending on the previous phrenitis. When the animal has exhibited no great ferocity or delirium, little inflammation of the meninges appearing. I have never seen much increased vascularity of the cerebral substance.

In every case the medulla oblongata is affected. Occasionally, an injection of the membranes, curiously marked, when compared with a portion of the spinal cord below, or the cerebral mass above. The substance of the medulla oblongata, and especally of the corpora olivaria, generally presenting increased vascularity. Minute specks of blood following the scalpel, and the greyish yellow of the corpus olivarium having a slight hue of pink mingled with it.

I have seen vascularity of the membranes through the whole of the spinal cord, and, in a few instances, this vascularity has increased about the lumbar region; but, generally speaking, no decisive trace of disease is to be found in any part of the vertebral canal.

Cases or Communications, addressed to the *Editor of the Veterinarian*, at the *Printer's*, (post paid) will meet with due consideration.

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THE

VETERINARIAN.

VOL. I. MARCH, 1828. No. 3.

ANATOMY OF THE HORSE.

(Continued from page 45.)

CERTAIN TERMS used in descriptive anatomy may require some explanation.

The anatomist views the body in the erect position; the limbs preserving, in the direction of the tendency of the weight, perpendicular lines in respect to the trunk, and parallel lines in regard to the correspondent fore and hind feet, and also, in the transverse direction, in relation to one foot to its fellow; the head and neck maintaining their natural degrees of elevation and curvature; the tail erect. In this position, the anatomist assumes, to aid him in his descriptions, that an imaginary plane extends through the body, bisecting it into lateral halves; this is continued through the neck and head, and descends between the legs. The correlative terms, *superior* and *inferior, anterior* and *posterior,* require no elucidation, unless it be in regard to the head and neck: the line bounding the superior regions is considered to extend from the tip of the coccyx over the occiput to the upper lip; that forming the inferior boundary, from the lower lip, along the under jaw, down the neck, and along the belly, with some interruption in the croup, to the extremity of the tail. The adoption of the compounds of these terms, leads to still further accuracy in description: such are *antero-superior, antero-inferior, supero-anterior, infero-anterior,* &c. Antero-superior denotes the anterior compartment of the superior region: *supero-anterior,* the superior compartment of the anterior region; and so on. *Inner* and *outer* express relation to the bisecting plane, running through the *median* or *mesian* region: but the compounds *mesio-superior, mesio-posterior,* &c. have no reference whatever to the mesian or middle regions: they simply imply the middle compartments of the superior and posterior regions.

According to this arrangement, every distinct part, the head, neck, shoulder, quarter, arm, thigh, &c. is divided, by imaginary lines, into five regions:—superior, inferior, anterior, posterior, and middle; each of which is subdivisible into three minor compartments: *e. g.* the superior region is distinguishable, if required, into antero-superior, mesio-superior, and postero-superior; the anterior into supero-anterior, mesio-anterior, and infero-anterior; and so with the others. Without such knowledge, the anatomical detail, to follow, might prove perplexing or even unintelligible: by its possession, the work of the anatomist is abridged and facilitated; the task of the student rendered less wearisome and more profitable.

OF THE TRUNK.

The trunk comprehends the vertebral chain, the thorax, and the pelvis.

I.—THE VERTEBRAL CHAIN.

Also called the spine, vulgarly the back-bone, reaches from the occiput to the sacrum, constituting the bony structure of the neck, back, and loins, and consists of 30 separate pieces, denominated *vertebræ*, which are classed, in accordance with the part they enter into the formation of, into cervical, dorsal, and lumbar.

Configuration. It bears altogether a resemblance to an S, providing the letter be reversed, turned in the horizontal direction, and an additional curve given to it; thus, ∾. Proceeding from the vertex with more or less crest-like curve, it sinks into a bend in the opposite direction at the posterior part of the neck; from this, in the back, it at first gradually rises, but shortly afterwards pursues the horizontal line, or even dips a little: in the loins, however, it rises very perceptibly, forming an arch of considerable extent, which, posteriorly, is completed by the declivity of the coccyx.

OF THE VERTEBRÆ IN GENERAL.

Conformation. The vertebræ bear a common resemblance, one to another, manifested by the following general characters. Every vertebra is in form symmetrical, and presents middle and lateral divisions. 1*st*. The middle consists of the body, a cylindrical solid part, having a convex surface anteriorly, a concave one posteriorly, and both roughened by the implantation of the intervertebral substances; the arch, extended transversely from

the sides over the body, so as to include its superior surface; and this surmounted by the spinous process; lastly, the vertebral, spinal, or medullary hole. *2nd.* The sides present two transverse processes, jutting outward; four articulatory processes, two anterior and two posterior, having smooth surfaces for articulation with those of the vertebræ next to them; four notches, the excavations between the arch and the body, constituting, by opposition with others in the contiguous vertebræ, the holes of conjugation.

CERVICAL VERTEBRÆ.

Larger than the others, and differ more remarkably in their individual conformation.—In *number*, seven; and named according to their numerical order, beginning from the head: the first, however, has got the designation of atlas, and the second, of axis or vertebra dentata.—In *figure*, quadrangular. Body, oblong; anterior surface of it, smooth, convex, heart-shaped, apex turned downwards; posterior surface, correspondently concave. The vertebral hole is larger than in the other classes, and semi-oval in figure. Two spinous processes; the crest or superior one is bifid, cleft and divergent posteriorly, united at a sharp angle anteriorly; the inferior (the additional) spinous process is curved like an S reversed and inclined ⌒; being convex and prominent posteriorly, sharp-edged and curved upwards anteriorly. The transverse processes are very broad, but short, arise from the body as well as the arch, are bifid, presenting four projecting ends, two forwards, two backwards, and are each perforated by a foramen, which transmits the vertebral artery and vein. The articular processes are large, directed horizontally forwards and backwards, and present broad surfaces for articulation; those on the anterior looking upwards and inwards, those of the posterior downwards and outwards. The notches are found between the articular processes and the body.

DORSAL VERTEBRÆ.

Volume, less than that of either of the other classes.—*Number,* eighteen; (in some instances, nineteen;) distinguished by their numerical order, counting from the neck backwards. Body, small; short, thick, and semi-circular; flattened superiorly, prominent and edged inferiorly; anteriorly, smooth, convex, and heart-shaped; posteriorly, correspondently concave. At the junction of the arch with the body are situated four small cup-shaped articular surfaces, two presented forwards, two backwards, which in conjunction with those next to them form

sockets for the reception of the heads of the ribs. The vertebral foramen is of less diameter than in the neck, and is oval from side to side. Spinous process, long and flattened on its sides; thick and triangular or prismatic at its root; presenting a sharpened edge forwards, a flat or obtuse border backwards; thick, irregular, and tuberous at its summit. Transverse processes, short and thick, incurvated upwards, and tuberous at their extremities; their sides presenting circular articulatory surfaces for the tubercles of the ribs. Articular processes, very short and proceeding from the roof of the arch: the anterior, face upwards; the posterior, downwards and backwards. There are only two notches, and these are smaller than those of the cervical; they are situated between the posterior articulatory processes and the costal surfaces upon the body.

LUMBAR VERTEBRÆ.

Volume, between that of the cervical and dorsal.—*Number,* in some subjects five, in others six. Body, short and thick; flattened superiorly, prominent inferiorly; and bearing much resemblance to that of a dorsal, only that it is something larger, is oval from side to side, and thicker anteriorly than posteriorly: its articulatory convexity in front and concavity behind assume also rather an oval than a heart shape. The vertebral hole is simi-circular, and of larger diameter than in the dorsal vertebræ. The spinous process is shorter than most of the dorsal; has broad flat sides; protuberates at the front of its summit; and stands erect with a very slight inclination forwards. The transverse processes, stand out horizontally, at right angles from the body, slightly inclined in the form of arches; are long and broad; flattened above and below; and gibbous at their extremities. The articulatory processes, though small when compared with the cervical, are larger than the dorsal; they project from the roof of the arch in the horizontal direction: the anterior, protuberate at their extremities, are wide apart, and present concavities inwards; the posterior, are nearer together, and present convexities outwards. The notches are similar to those in the dorsal vertebræ.

PECULIARITIES OF THE VERTEBRÆ.

Of the cervical, four vertebræ are distinguished by peculiar characters.

The First Vertebra, inappropriately named the *atlas,* (for the head is suspended from it instead of being supported by

it,) is defective in the essential vertebral properties ; being simply an irregular ring with broad projecting sides. It has no body; the place being in part supplied, in the articulated spine, by the odontoid process of the second vertebra, for the reception of which, the infero-posterior part of the ring is made smooth and articulatory ; this somewhat reduces the dimensions of the vertebral hole, though it remains even then the most capacious of any, and measures more from side to side than contrariwise: its inferior surface is deeply impressed by the odontoid ligaments. It has no superior spinous process, but there is a prominence in the situation of it ; and the inferior spine is shorter, thicker, and more obtuse than the others. The transverse processes are broad undivided lateral plates, sloping downwards, perforated by three pairs of foramina :—one posteriorly to their middles, through which run the vertebral arteries ; two through their anterior parts, one of which is directed outwards and downwards, the other runs inward and opens into the vertebral canal: the latter give exit to the sub-occipital nerves. The anterior articular processes are represented by four horizontal projections, with simicircular borders, whose internal surfaces are smooth, placed opposite each other, and together form two lateral concavities for the reception of the condyles of the occipital bone. The posterior articular processes are formed into broad, triangular, convex, smooth surfaces, looking backwards, with an inclination inwards.

The Second Vertebra, or *axis*, also denominated the *dentata* (from a peculiar projection anteriorly, which in the human subject is resembled to a tooth) is the largest of the cervical class, exceeding the others however more in length than in breadth. The body is elongated, and (in place of a hemi-spherical termination) anteriorly, presents the remarkable process named the odontoid, which is smooth and convex below, where it articulates with the infero-posterior part of the ring of the atlas ; excavated and impressed above by the odontoid ligaments. The spinous process is very broad, and forms an elevated crest, bifid posteriorly. In front of the body are two oval foramina, corresponding to the holes of conjugation. The transverse processes are slender, and have only posterior extremities ; the holes through them are also small. The anterior articular process are represented by two broad ovoid smooth surfaces ; united with the sides of the odontoid projection ; and sloped off backwards, both above and below, to admit of free motion between them and the posterior articular surfaces of the atlas.

The Third, Fourth, and Fifth possess the genuine cha-

racters of cervical vertebræ, and closely resemble one another; the third however has commonly a more elevated superior spine than either of the others, and is narrower across the mesio-superior part of the body, measuring from the roots of the articular processes: which dimension increases in the fourth, but is greatest in the fifth.

The Sixth has no inferior spine; and its transverse processes are trifid, consisting each of three eminences.

The Seventh Cervical Vertebra is the shortest, and in its general conformation partakes of the character of the first dorsal. Its body posteriorly presents two semilunar articular hollows for the formation of the sockets for the ribs. The superior spine is elevated and sharp. The transverse processes are short, obtuse, and not perforated.

Of the dorsal vertebræ, the distinctions are less numerous and striking.

The First Dorsal Vertebra has a cervico-dorsal conformation, manifested in the form of the body, the length and sharpness of the spinous process, the protuberance and singleness of the transverse processes, the breadth and direction of the articular processes.

The Second Dorsal Vertebra differs from the others in the curvation of its spine backwards, against that of the third; and in the breadth and direction of its anterior articular processes.

The other dorsal vertebræ are distinguishable principally from the comparative form and length of their spines. The first spine is short compared to the second, and terminates in a sharp apex; the second has a broader extremity, and in some instances is bifid; the succeeding grow broader and more obtuse at their ends until they assume a form similar to those of the lumbar vertebræ. The fifth spine is generally the longest; the 12th or 13th the first that assumes the lumbar character.

M. Girard correctly observes, also, that the articular depressions upon their bodies for the heads of the ribs are less deeply marked as we proceed backwards.

The Eighteenth Vertebra, and the seventeenth generally, have no articular surfaces upon their transverse processes, but *whole* ones upon their bodies for the ribs.

In the lumbar region,

The First, Second, and Third have broader spines, and their articular processes are nearer together; The Fourth possesses a surface for articulation with the fifth on each trans-

verse process; THE FIFTH assumes somewhat of the character of the first piece of the sacrum, and has four surfaces for articulation on its transverse processes; two anteriorly, opposed to those on the fourth; two posteriorly, adapted to similar surfaces on the sacrum.

DISEASES OF HORSES IN INDIA.

By C. PERCIVALL, *late Veterinary Surgeon, His Majesty's* 11*th Light Dragoons.*

IT is with much pleasure I avail myself of the opportunity which now offers through the medium of the "Veterinarian" of submitting for the perusal of the Profession the subjoined cases of *Dislocation;* an accident, although very common in the human subject, I believe in the horse (at least so far as my own observation has extended) to be confined to one bone; and even in this single instance (from the fact of its not having been noticed by any of our Veterinary Writers, with the exception of the Author of the "Elementary Veterinary Lectures") appearing unknown to practitioners in general: circumstances which induce me to tender them for insertion in your Journal. Having, in the course of my professional avocations met with no less than eight cases, and five of them within the space of little more than two years, during my residence in India, I am inclined to believe dislocation to be much more frequent than English Practitioners in that country are probably aware: at all events, of more frequent occurrence in India than in England; probably arising from the peculiar manner in which not only troop-horses, but horses generally are *tied up*, whether in camp or cantonments; of which it may not be amiss to preface the cases with a brief description.

In the fore part of the stall, on either side, is driven into the ground a strong wooden peg, about two feet long; and to each of these pegs is made fast a rope or side-line coming from the collar: in this manner is the head confined. Similar pegs to those already mentioned are driven into the ground fifteen or twenty feet distant from the hind legs, to which two strong ropes are fastened, coming from leathern straps encircling the hind pasterns, and secured within the hollow of the heel; the straps being padded and lined to prevent their chafing or rubbing off the hair.

I am inclined to think that in the majority of cases, dislocation happens either from the horse being hurt in the stall, or in the act of lying down, or in making a violent effort to rise when down.

This method of confining horses in their stalls, not only subjects them to greater liability to be injured; but they all of them experience from it more or less difficulty in lying down, and more still in rising when down; for the ropes not only fetter the legs, but are every now and then themselves becoming entangled with one another. As might be anticipated, what proves an aggravation to this evil, is their not being allowed sufficient length of rope to admit of much alteration of posture; which is owing to great numbers being so vicious that unless the man who looks after such an animal took the precaution to secure the hind legs, it would be highly dangerous for any stranger to approach him, and be even attended with risk to the man himself while in the act of cleaning him.

So that the animal is kept standing with his legs fettered and extended for many hours, and frequently for days and even weeks together, unless the eye of the master chance to be directed that way: this proves a cause (I cannot help thinking) of the disease termed Kumree or Kummeree; which is an affection of the loins, and a malady horses in India are very subject to.*

DISLOCATION OF THE PATELLA.

Case I.

Meerat, Sept. 23, 1824. A dun horse, five years old, the property of Lieutenant ———, of the 11th Dragoons, was found by the groom on entering the stable on the morning of the 23rd of Sept. 1824, so lame that he was incapable of moving from one side of the stall to the other. On the owner calling upon me, to visit the horse, he observed he thought his leg was broken; in fact said, that "he would never more be worth sixpence."

I according visited the animal, and found him standing with the off hind leg projected backwards, the foot and pastern flexed to their utmost, with perfect inability of extension forwards, a slight swelling on the outside of the stifle-joint, accompanied

* Kumree is commonly spoken of as *a Stroke of the Wind*, from the supposition that it arises from the horse being exposed to the wind or a current of air.

with some degree of tenderness. I made the gentleman acquainted with the nature of the case, (which did not much lessen his alarm), and immediately set about reducing it in the following manner.

An assistant having carried the limb forwards and upwards, towards the abdomen, in order to extend as much as possible the stifle-joint, I applied my hand to the outer angle of the patella, which, in the act of depressing and at the same time gently forcing forwards and upwards, the extensor muscles suddenly drew into its proper situation, and the horse walked out of the stable perfectly sound.

The after-treatment consisted simply in administering a cathartic, using the cold bath and evaporating lotion to the stifle; with strict injunctions that he should be kept as quiet as possible, and not allowed to lie down for at least a fortnight. At the expiration of three weeks he resumed his accustomed exercise, without experiencing any inconvenience whatever from the accident.

Case II.

Meerat, Oct. 27, 1824. Captain ————, of the 11th Dragoons, sent for me on the evening of the 27th of Oct. 1824, to see a chesnut colt, four years old, belonging to him, which he stated in his note, was so lame that they could not get him out of the stall, or rather box in which he was standing.

On visiting him, I found the patella dislocated outwards, accompanied with precisely the same symptoms as detailed in the preceding case. I immediately set about affecting a reduction of it, in the manner I have already described, which I had no sooner accomplished than it was immediately displaced again; the same thing occurring half a dozen times within the space of ten minutes; so that I had almost begun to despair of keeping it in its place at all; when to my satisfaction, by retaining it there for some time after reduction, all was left well.

He was kept tied up about a fortnight (subjected to the same treatment as the former case), at the expiration of which time, being in training he resumed his gallops, without showing any sign whatever of lameness.

Case III.

Meerat, May 6, 1825. A dun horse, belonging to Captain C————'s troop, was reported to me by the Farrier-Major as being so lame (apparently from cramp) that he could scarcely

draw his near hind leg after him. The limb was drawn backwards, and felt quite stiff, the foot and pastern fixedly flexed, with total loss of power of extension. I found the patella was dislocated outwards; which having reduced, I adopted the same treatment as before mentioned, and on the 23rd he was discharged from the hospital stable.

June 16. Re-admitted this morning for a recurrence of the luxation. I replaced the bone, and ordered him to have a purging ball, the cold bath and evaporating lotion to the stifle; and to be kept tied up. The bath and lotion were continued until the 25th, and then a liquid blister was applied to the stifle, which was once repeated. He was discharged perfectly sound on the 22nd of August.

Case IV.

Camp, Mattra, Nov. 18, 1825. A grey horse, eight years old, belonging to Captain R———'s troop, was reported to me by the Sergeant-Major, as being so bad with the cramp that he had not the least use in his near hind leg. I found the patella dislocated outwards, the limb being stretched out behind him, and quite stiff, when moved dragging the foot and pastern (which were very much flexed) along the ground. Having reduced it, I ordered him to be tied up, so that he could not lie down, and the same treatment had recourse to as in the foregoing cases.

On the 19th, owing to the badness of our ground of encampment, together with the scarcity of water, the regiment marched to Panu Gunge, a distance of between four and five miles, which he performed extremely well. He remained on the Sick Report until the 29th, when he was discharged, and did not experience any further inconvenience.

Case V.

Camp, Bhurtpoor, Feb. 4, 1826. When in the field, before the Fortress of Bhurtpoor, I had occasion to visit the Camp of the 16th Lancers, on the opposite side of the fort.

Previous to taking my departure, I was requested by the Veterinary Surgeon of the regiment to look at a horse belonging to an officer of the same corps, which he stated he had castrated about a week before, ever since which he had been excessively lame. Prior to my seeing the horse, he observed it was a very extraordinary case, and one that he could not at all *make out;* but looked upon it, as a case of lameness arising from exposure to cold, having had several similarly affected.

We accordingly proceeded, in company with the owner, and another officer of the regiment, to examine the horse. The instant I saw the case, without the slightest hesitation, I pronounced it to be a dislocation of the patella outwards, pointing out to them a slight swelling observable on the outside of the stifle-joint; to all of which little or no attention was paid, they still imputing it to cold; and the circumstance of my having made two unsuccessful attempts to reduce it, tended to strength them in the opinion they had formed.

I however felt so confident in my own mind, as to the nature of the case, that I made a third attempt, when after a great deal of trouble, and using no small degree of force, I succeeded in replacing the bone; on which, to the astonishment of all present, the animal walked as well as he had ever done in his life, although they had not been able to move him from the place in which he was picketted for upwards of a week.

Here the scene closed by the owner's returning me his sincere thanks for the service I had rendered him, having looked upon it as a hopeless case.

N.B. The difficulty I experienced in reducing the dislocation in this instance, which was so much greater than in any of the preceding cases, there can be no doubt arose from the bone having been so long displaced.

WORM IN THE EYE.

Case I.

November 23, 1823. A brown horse, belonging to Captain M——'s troop, was reported to me by the Farrier-Major, (on my joining the 11th Dragoons,) for having an inflamed eye, he stating he believed that the animal had received some injury, as the eye had been *bad* for the last ten days or a fortnight. I found the eye-lids nearly closed, the conjunctiva highly inflamed, accompanied with a nebulous effusion obscuring the cornea lucida, the vessels of which were red and tinged with blood. On opening the eye-lids with my finger and thumb, I perceived a small white worm floating about within the aqueous humour, sometimes at the superior, at other times the inferior, part of the eye. I ordered him to be fed with bran mashes, with a view of operating on him the following morning. In puncturing the cornea with a small lancet, at the posterior and inferior

parts, near to its junction with the cornea opaca, as much out of the range of the pupil as possible, the young parasite made his escape with the aqueous humour, and was received upon a napkin held under the eye.

The worm measured an inch and a quarter in length, was about the size of a piece of common sewing thread, perfectly white, and pointed at both ends. Viewed through a microscope, it resembled a piece of catgut: there were five luminous marks distinguishable upon one end of its body, supposed to be the head; farther backward there was an irregular luminous patch, from which two brilliant lines ran parallel to the other extremity. The after-treatment merely consisted of such remedies as were likely to subdue the inflammation:—Venesection, brisk cathartics, fomentations, and the exclusion of light from the eye.

Under such treatment the inflammation subsided, and the eye became gradually clear; the effused lymph was absorbed, with the exception of that upon the spot where the cornea was punctured, which remained, about the size of a sixpence: to remove this I had recourse to a variety of applications, but without conferring much benefit. I accordingly discharged him from the hospital stable on the 30th of December, the eye being in every other respect perfectly sound.

Still, however, this nebulous patch from time to time gradually diminished in size; so much so that on the 10th of October, 1824, it was not more than one half the size it was when the horse was discharged.

Case II.

February 2, 1825. A dun horse, belonging to Captain C——'s troop, was discovered to have a violent attack of inflammation of the eye, supposed to have been occasioned by grass, or some foreign body, getting into it, as it exhibited no appearance whatever of ailment the previous evening.

Owing to indisposition I was prevented from seeing him until the morning of the 5th, when the cornea lucida was partially obscured from the nebulous effusion, the tunica conjunctiva lining the eye-lids highly inflamed, and the vessels shooting into the cornea red and very turgid.

The animal was very shy of approach on that side; however, it did not require a very close inspection, for even while standing at some distance from the animal I plainly saw a worm floating about in the aqueous humour.

I operated on him forthwith by puncturing the cornea in the

manner I have already described ; which done, the worm made its escape, and was if any thing both larger and longer than the one I have already given a description of. On making inquiry of the Troop Serjeant-Major, he informed me he had observed the eye to look dull and heavy for some weeks previous to its putting on the white appearance, (alluding to the effusion of lymph into the transparent cornea) which he observed came in the course of the night, it having been perfectly clear at the stable hour of the previous evening.

He was subjected to the same after-treatment as the preceding case. In the course of five or six days the cornea began to clear, the effused lymph being from time to time gradually removed, and on the 12th of March he was discharged with a speck on the cornea, at the place it was punctured, about the size of a pea or somewhat larger.

On the 27th of May I found the opacity so much diminished that it required a close examination to detect it. Had not the former case been of such long standing, I have every reason to believe I should have been equally successful in the treatment of that likewise. Unless the worm is extracted, the case invariably terminates in blindness.

Extracts from Foreign Journals.

WORMS IN THE EYES OF OXEN.

By M. Chaignaud, *Veterinary Surgeon at Montmoreau, Charente.*

THIS disorder is so far from being novel that it caught my observation in 1805, the year I quitted the Alfort College, since which time I have met with upwards of 150 cases of it, and have invariably treated it successfully, unless called in too late.

In the Transactions of the Veterinary School at Lyons, for the medical year 1822-23, there is an account of a mule which was placed under the care of M. Boudgourd, Veterinary Surgeon at Nisms, for a disorder very similar to the present one. One eye was affected, and two thread-like worms, seen floating in the aqueous humour, was extracted by puncture of the transparent cornea. Twenty days after the operation, all appeared

to be going on well, when the symptoms returned and another worm was discovered in the same eye; for which a second operation was performed. The animal eventually lost the eye; but had no further return of the disease.

Rarely but one eye is affected, and from the very commencement opthalmia makes its appearance. The eye becomes lachrymose; the lids swell; the conjunctiva grows more or less reddened; the transparent cornea dim, &c. These symptoms might mislead a young practitioner and induce him to regard that as a primary disorder which was but consecutive upon another. Such was the case with myself: thinking I had opthalmia to deal with, I employed suitable means; but finding they availed nothing I was led to make further examination, and then was surprised at the discovery of a small perfectly white worm, about the size of a hair, and an inch in length, swimming in the aqueous humour. The circumstance led me to conceive that medicines regarded as anthelmintics, might, even topically applied, through the medium of absorption, have the effect of destroying these parasites; and I determined with this view to make trial of the tincture of aloes, as will be seen hereafter.

At present I pronounce on such cases with much more certainty. In my examinations, I take care that the eye be confronted with a strong light, by turning the animal round to the threshold of the stable-door; and I am slow and cautious in deciding. Should the disorder be incipient, it is easy to discover in the bottom of the anterior chamber of the eye, one or two little bodies of a reddish white colour, and about the magnitude of small peas: these are the envelopes or germs of the future worms. I have actually observed after three, four, or sometimes ten days, these animalcules, coming into existence, in continual agitation. In 24 or 36 hours they are completely developed; and move about without interruption upwards and downwards and in front of the iris, which they occasionally touch. This is the only time the beast manifests any uneasiness, which he now does by shaking his head, as if something unexpected had surprised him. In most cases it is a solitary worm: rarely two or three. I shall not attempt to account for the presence of these strange productions: I could offer nought but hypotheses, and others can do that as well and perhaps more plausibly than myself. As far as my own experience has gone in my present part of the country, the disorder generally appears about June and leaves in November: I have never seen it in any other season. Does it require a certain temperature of the atmosphere to give birth to these parasites? I cannot affirm so much.

Whether the worm be already hatched or the germ only be present, the treatment is all the same : in one case it arrests the formation of the worm ; in the other it destroys it. The remedy consists in a mixture of equal parts of tincture of aloes and water (better if it be distilled). The head is to be so inclined that the eye is directed upwards, the lids are to be distracted, and half-a-tea-spoonful of this mixture poured over the surface of the globe of the eye ; immediately this is done, the animal closes the eyelids and works the eye about on every side. The circumference of the lids should also be wetted with this lotion. The same dressing requires repetition thrice a day, and for three or four successive days, or until such time as the worm can no longer be perceived to move. But it seldom survives this period. In some cases from the very first day the worm sinks motionless into the bottom of the chamber, and there remains along with its envelope or germ ; after which both become absorbed, and the eye, as the absorption goes on, recovers its former condition. The recovery is more speedy when the inflammation of the surrounding parts, as well as the eye, occasioned by the worm and the injections, is checked by appropriate means. A decoction of mallows with a few drops of acetate of lead I find very useful. Unless the disorder be advanced this treatment will prove successful ; when the worm has made ravages in the eye, all measures are unavailing : the pupil becomes dilated ; the chrystalline acquires a yellow hue, and afterwards manifests opacity, which increases until the sight is quite gone.

Remarks on the foregoing Paper, by M. Desmarets.

Long since, our attention has been directed to the presence of worm within the eye of the horse. Hopkinson has mentioned (in the Second Volume of the Transactions of the Philosophical Society of Philadelphia) one from two to three inches long, of the size of a thread :* the same work also contains an account of a *living serpent* being discovered in the horse's eye, which appears to be nothing more than the same production.†

It has not yet been definitively settled to what species this worm belongs. M. Budolphi seems inclined to think that it comes under the *Filaria Papillosa ;* and what to me appears to strengthen this opinion is the fact of the filaria papillosa, which

* Account of a Worm in a Horse's Eye.
† Of a living Snake in a living Horse's Eye.

is peculiar to the horse, being found within the cellular tissues and also within the cavities of the abdomen, thorax, and cranium; hence, I see no impossibility why either the worm itself, of a minute size, or its germ, may not through similar passages make its way into the eye, wherein the humours proving favourable to its existence, it becomes developed.

In regard to the worm found within the eye of the ox, there appears every reason to class the observations of M. Chaignaud with the case of one discovered by M. Rhodes,* from which Bosc formed his genus *Thelazius*, a kindred one to the filaria papillosa in respect to its general conformation and in particular its mouth. Nevertheless, Bosc, following Rhodes, observes that this worm has been found *upon the eye*,† and *under the eyelid*,‡ of the ox, a different situation from that assigned to them by M. Chaignaud, whose description of the worm is unfortunately too general to make any comparison. In our opinion a difference of habitation ought not to banish the idea of identity; for if, as we suspect, the worm discovered by Rhodes is of the filaria family, it must possess the same itinerant propensities, and therefore it need not surprise us that from the chamber of the eye, wherein it has been developed, it should make its way through the different tissues forming the tunics of the organ to take up its residence under the lid.

How ever this may be, we will give the characters of the *Thelazius Rhodesii*, be it or not the worm of Chaignaud :—Body elongated, cylindrical, $\frac{1}{3}$ of an inch in length and less than $\frac{1}{200}$th part of a line in diameter; attenuated at either extremity, terminated anteriorly by a tri-valvular mouth, surrounded with four oval stigmata, and posteriorly and below by a long bilabial cleft, considered by Rhodes to be the anus, and which at the same time serves as a vacuum to fix the animal while it imbibes the humours of the eye; one large tortuous gut running from the mouth to the anus; the substance composing the body soft, white, and semi-diaphanous, strengthed in front by circular fibres.

I have not hitherto had an opportunity of examining one of these worms. But, up to the present time, in the intestinal worms, nothing like a special organ of respiration has been discovered; and in all others in which such has been demonstrable, no such arrangement has been remarked analogous to what Rhodes and Bosc have ascribed to the *thelazy*.

* Veterinary Surgeon in the department of Gors.
† Nouv. Dict. d'Hist. Nat.
‡ Bull. Soc. Phil. 1819.

To conclude, I should like to be informed whether in those cases in which worms exist within the eye they are not to be found also under the meninges and other similar serous parts of the cerebral cavity of the ox, situations wherein the filaria papillosa are bred in horses. In fact I have great curiosity to know if the former of these worms owes its origin to the latter.

VESICAL AND BILIARY CALCULI.

By M. Riss, *Veterinary Surgeon, 5th Regiment of Cuirassiers.*

IN March, 1824, I was sent for to see a horse, suffering from violent colic, which had since the day before resisted all the ordinary remedial measures of our country farriers.

I was informed that the animal was subject to these attacks, which subsided as soon as an abundant flow of urine supervened; that he had continued at work, notwithstanding he had for the last six weeks very perceptibly lost flesh, and the colics of late had returned oftener, and his urinary evacuations so frequent that he had staled 15 or 20 times a-day, the urine being small in quantity, sometimes clear, but commonly bloody. This gave me almost certain information of the malady I had to treat.

The symptoms I observed were—pawing, lying down, rolling, frequently rising, stamping with the fore feet, looking backwards at the flanks covered with perspiration, making frequent but fruitless efforts to stale, unsheathing the yard every time and retracting it afterwards; vacillation of the tail, after the manner of a horse teased by flies; pulse at the jaw hard and hurried; I found the bladder, *per rectum*, so distended that it filled the pelvic cavity, but was unable by pressure with the flat hand upon it to force out a single drop of urine; indeed, pressure only served to augment the animal's sufferings. There was evidently an obstacle then to the discharge of urine: what was the obstacle?

I was prepared to pass a sound, when, tracing with my hand the course of the urethra, I found about three inches below the anus, a prominence in the perineum occasioned by an oval body,

very hard, feeling like a calculus. Light pressure, from below upwards, caused this body to ascend into the bladder; and then the urine, quite clear, flowed in abundance. All colic and agitation immediately subsided, and the animal commenced feeding, relieved from all his pain.

Now that the bladder was empty I felt for the stone within its cavity, *per rectum*, and having easily found it, I pushed it back into the urethra, into its original place of lodgment, and thence endeavoured to force it onwards; but all my efforts proved unavailing: so I determined on lithotomy. By leaving the stone in the urethra I found I could at pleasure reproduce the symptoms: though, sometimes, by a peculiar twisting of the loins, the animal himself could force it back into the bladder.

Having with hobbles confined the hind legs of the horse in the erect posture, as for nicking, and forced up his head with a twitch, I grasped the stone within the impassable and swollen part of the urethra in which it was originally found. The tail being held erect by an assistant, I directed a straight bistouri longitudinally through the middle of the prominence, from above downwards, to the extent of two inches, and through this incision easily turned out the stone with my fingers. It was of an oval shape, flattened on one side, pointed at one extremity, round at the other, yellowish black, shagreened throughout its texture, and very hard. A dossil of lint was placed upon the wound and confined there by suture.

No untoward symptom supervened; unless, might so be called, some inflammation around the wound occasioned by the acridity of the urine, which for the subsequent four or five days in part passed through it. This ceasing, the wound cicatrized rapidly and the animal was perfectly restored nineteen days after the operation.

August 2, 1824, a mare in being led from the stable to a field, about 300 yards distant from it, was suddenly seized with such a weakness in her hinder parts that she fell down several times, and was at length unable to rise without assistance; in consequence of which she was taken back into the stable. The next morning I saw her, and found that for some days she had been observed to be weak in the loins, which now had increased to such a degree that she with pain stood erect, and she reeled

about in walking; the croup was in continual motion, the flanks tucked up, but not agitated, the dorsal spine slightly arched, the pulse hard and full, and the artery rolling. The interior of the rectum felt extremely warm; pressure on the bladder from below backwards caused the expulsion of half-a-pint of clear urine.

Waiting for symptoms more characteristic, I ordered venesection, emollient clysters, spare diet, water gruel, &c.

On the night of the 8th the animal, in spite of every effort to maintain the erect posture, sank down upon the litter, in which position she ate and drank as before. Two days afterwards in consequence of contusions received she was suspended.

The same day the owner informed me that the mare had been making constant efforts to stale without being able to posture herself, and that only a very small quantity of urine passed every time; also that these efforts were preceded by spasms and frequent sweats along the flanks, whose motions had become accelerated.

These fresh symptoms directed my attention to the bladder; I carried my hand into the vulva and introduced the index finger into the meatus urinarius, and discovered within the bladder a semi-solid terreous mass occupying the whole inferior part of it.

I tried to attenuate this collected matter by injections of warm vinegar and water, but ineffectually; I therefore introduced a spoon into the meatus urinarius and succeeded in extracting one pound ten ounces of terreous substance of a yellowish cast and a strong infectious odour.

The bladder being almost empty, I found by the touch that there were several exulcerations in the lower part, and that portions of the mucous lining were floating within the cavity. I injected into the bladder a decoction of mallows in vinegar, and prescribed clysters and spare diet.

On my next visit, on the 11th, I found the genitals greatly tumefied, their mucous lining highly inflamed, and the pulse increased in strength. Also, occasional slight colics; frequent *borborygmi;* bladder full; urine discharged by light pressure, very thick and of a yellow colour.

These symptoms were owing to the irritation occasioned by the frequent introduction of the fingers, spoon, and syringe into the bladder; the colic I ascribed to the propagation of the inflammation to the peritoneum and intestines. Diluents, fomentation, soothing lotions.

The repeated introduction of the syringe causing much irritation, I constructed a steel canula, 14 inches long by one in diameter, curved, and terminated by a tin bulb, with the other end formed into a small funnel.

The bulb end of the canula being pushed into the bladder, whenever the funnel at the other extremity was turned downwards, urine flowed through it; and when it was inverted, turned upwards, any fluid (an injection such as mallow decoction) found its way into the bladder, which by this contrivance was easily lotioned after it had been evacuated of its urine.

This detersion of the internal exulcerations was continued thrice a day for fifteen days.

It was not however until three weeks that the urine ceased to produce irritation; and not for a month after the discontinuance of the injections that the ulcerations had cicatrized and the parts were restored to their former state of tranquillity.

HORN FOUND WITHIN THE STOMACH OF A FŒTUS.

By M. Crepin, *Veterinary Surgeon, Member of the Society of Medicine, &c.*

DECEMBER 29, 1821. A mare seven or eight months gone with foal died from well-marked acute peripneumony. The desire to learn if the disease of which the dam had died had affected the fœtus in any way, led to an examination of the latter, as well as the former. We were going to conclude that no such influence had been transmitted, and that every organ in the fœtus was sound and healthy, when, out of mere inquisitiveness, opening the stomach, we were surprised by the following appearances.

The stomach contained a certain number of little bodies of a brown colour verging to a red, having a fibrous texture, easily torn in the direction of the fibres, but sufficiently resistant the other way. Of their form an idea may be conveyed by comparing them to portions of the layers of an onion, torn or cut into longitudinal segments; varying from an inch to 1½ in length, and from a line to a ¼ of an inch in breadth; the thick-

ness being much about equal in all. This description includes about a dozen or fifteen of them; but there were, besides, an infinity of irregular pieces, which differed but in form and dimensions; their substance was the same; and they were all soaked in a turbid whitish fluid, grumous, and somewhat like unclarified whey.

On mere inspection and by the touch, the horny nature of these substances was at once perceptible; in fact, they were nothing more than pieces of horn detached by a sort of shedding process from the feet of the fœtus, which presented marks of their exfoliation, and also others ready to be cast off yet adhering to the crust. Floating about in the water of the amnion: there were also a number of these substances, differing in no respect from the others saving in their albugineous aspect, which the action of the stomach seemed to have deprived the others of.

This fact, perfectly novel I believe, appears to me to be one likely to rouse the curiosity, and perhaps even fix the opinion of the learned on a point of physiology unsettled up to the present hour: the natural conclusion seems to me to be, that the introduction of the water of the amnion into the stomach of the fœtus, either simply through physical means, or by an act of deglutition, is not an impossible proceeding, as many physiologists have thought.

I may add that this occurrence is not to be regarded as extraordinary or as a *lusus naturæ:* twice have I had occasion since 1822 to examine fœtus *in utero,* and in both cases made the same observations.

INJECTION OF OPIUM AND ACETATÉ OF MORPHIUM INTO THE VEINS OF THE HORSE.

By M. Dupuy.

IT appearing to Magendie from numerous experiments on living animals that there existed in the brain two opposite motive faculties, one belonging to the cerebrum presiding over movements forward, the other possessed by the cerebellum presiding over the backward movements, he conceives himself warranted in deducing as a consequence, that in those diseases attended

with impaired or suppressed motion backward, the cerebrum must either have undergone some physical alteration or there must exist some interference with its functions.

Dissection of animals so affected, observations on staggers in which the prevailing symptom is an uncontrollable desire to push forward; also experiments with opium, which when injected into the veins produces similar symptoms; have appeared to me the most likely means of throwing some light upon this question.

A lamb which for three months had been unable to support the erect posture, and which, when placed upon its legs, incapable of moving forward, retrograded step by step until it sank down and fell backwards, without however showing any symptom of staggers, discovered on being opened an hydatid lodged between the two layers of the arachnoid membrane, compressing the left lobe of the cerebellum, which it had flattened.

It is now nearly five years ago since I first remarked that the injection of opium into the veins of the horse gave rise to symptoms resembling those of staggers, and more particularly that characteristic one, *thrusting the head against the wall.*

In an experiment I made on a horse in 1818, of injecting two ounces of opium into the jugular vein, I found that the animal marched forward after the manner of a machine; pushing against every thing standing in his way, and when one obstacle was removed heedlessly driving forward until he met with another. On repetition of the injection he died, extremely embarrassed in respiration. I found the thoracic portion of the eighth pair of nerves presenting a blueish cast, and the membranes of the cerebrum highly injected.

In 1824, M. Deguise, junior, M. Leuret, and myself, experimented on the effects of acetate of morphium; and although our researches were directed rather towards establishing the presence of poison in the blood and digestive canal than with any physiological view, yet we observed that morphium acted principally on the nervous system, and that the intoxicated animals experienced much difficulty in moving, particularly backward.

In November, 1827, in the afternoon, I threw a solution of 36 grains of morphium in distilled water, made warm, into the left jugular of an old horse given up for experiment. Pulse small and 38 in a minute.

Immediately afterwards, a slight tumour became manifest in the muscles of the thighs and croup. The eyelids, lips, and nose were seized with a convulsive agitation.

Five minutes afterwards, these tremors have increased and are becoming more general. The ears are pricked. The animal staggers as though he were inebriated; and cannot be made to take a step backward but with the greatest difficulty.

In ten minutes time he pushes involuntarily and convulsively forward; his look is fixed and staring. Pulse 72. Respiration 20.

Twenty minutes afterwards, he reels about more, but continues to advance, thrusting his head against any obstacle in his way; and when that is removed, pushing forward until he meets with another. He cannot be compelled to step backward.

The symptoms increase, so that he injures himself by rushing with violence against objects; indeed, vision seems to be gone. Pulse 102. Respiration 41.

At 2 o'clock he manifested all the symptoms of staggers; breaking out along the belly and extremities into a profuse sweat; conjunctiva reddened; buccal membrane deeply purpled.

Two hours afterwards the animal was killed by insufflation of air into the jugular.

Examination. Intestines brightened in colour, particularly the small, which tear easily and contain an unusual quantity of a yellow frothy liquid. Some nests of worms (filaria) in the stomach; small red spots upon its villous surface. The lungs presenting appearances correspondent to the disease (broken wind) with which the animal was affected. Their parenchyma less injected than in cases of asphyxia. The right ventricle exhibiting many small circular black spots, pervading the parietal substance, and attended with ecchymoses. Also some upon the septum. The left ventricle has ecchymoses, but smaller and fewer in number. The left jugular, which received the injection, presents a blush through almost its entire length. The 8th pair of nerves rather paler than usual, and their silvery hue exchanged for a deep yellow.

Slight serous effusion between the dura and pia mater; the cerebral mass highly injected, principally *in the direction of the anterior lobes.* The arachnoidean vessels gorged with blood. The cerebral pulp of a red dye, and *when cut issuing blood.* Ecchymoses within the substance of the roof of the lateral ventricles; also within the pituatury gland and the *cornua hippocampi.*—The cerebellum firmer than in the natural state; the membranes of the spinal marrow slightly injected at its origin.

These two experiments appear to me to corroborate what Magendie, Bouillaud, and Legallois have advanced concerning the opposite functions of the cerebrum and cerebellum. They afford good reason for believing that the anterior lobes of the cerebrum preside over motion backward, since during compression of the cerebellum, and consequent suspension or destruction of motive influence, retrogression is all that can be performed, as has been illustrated in the case of the lamb; on the other hand, when the anterior lobes of the cerebrum are the parts affected, the animal is only capable of moving forward: in which case the cerebellum preserves its integrity.

The first of these experiments, and likewise those cases of staggers in which cysts are discovered in the cerebrum, corroborate, nay, confirm this theory. Now, therefore, that it appears ascertained that in genuine staggers the cerebrum is affected, I shall prosecute my researches with a view of coming at a more scientific treatment of this malady.

In conclusion, we may observe, that the effects of opium are not correctly indicated by the words sedative, irritant, narcotic, debilitant, employed at the present day. Its characteristic virtue, one with which we have no parallel, is to act directly on the anterior lobes of the cerebrum: in large doses paralysing their functions altogether. Under its influence the will has no longer controul over the movements of the animal: he is precipitated forward in spite of every obstacle.

Communications and Cases.

CONTRACTED CARDIA.

A MECKLENBERG horse, eight years old, apparently perfectly sound, was purchased last August at one of the many sales by auction of continental horses which took place in the course of the summer: from which period until November, with the ex-

ception of a slight attack of catarrh, he continued to enjoy the same apparently healthy condition in which he was received from the *marchand de chevaux*.

November 30. My attention was called to him in consequence of his not performing his exercises in the riding school with his usual cheerfulness and activity, being naturally extremely animated; it was also added that he proved *foggy* at his work, and that for some days past he had not eaten his usual allowance of either hay or corn. I found his pulse quickened—55 to 60; his coat dry, and showing an inclination to roughen; his mouth partaking of this feverish condition, feeling hot and dry; his bowels disposed to costiveness: withal however there was nothing to lead me to suspect that any organ in particular was the seat of disease, or indeed that the disorder was any thing more than slight constitutional disturbance, which laxative medicine, mashing, and quietude would not in a few days remove.

December. Early in this month a remarkable symptom presented itself, and continued until the day of his death, one which I felt myself unable to account for, although, as the case eventually proved, it was highly characteristic of the disease; and that was—cudding his hay and even his corn, disgorging both after they had been well masticated and mingled with saliva, and were in a suitable state to be swallowed: it did *not* appear that the alimentary bolus entered the esophagus, and, not finding ready admission into the stomach, was thence returned into the mouth; at least, nothing like efforts to vomit or symptoms of such inverted action were ever observed; nor did the disgorged masses of hay, corn, &c. present any sort of form or compactedness which they might have been expected to have done providing they had been moulded within that canal. The appetite under these circumstances was for the first fortnight or three weeks rendered so keen that whenever fresh provender was set before him, he would seize it with great avidity, and appear to eat for a few minutes with a degree even of voracity,

as if he had been for a time kept in a state of starvation ; when, instead of swallowing what he took, he would return the bulk of it—chewed masses of hay thoroughly soaked with saliva —into the manger, and afterwards turn himself away from his food in apparent disgust. His drink consisted of water-gruel, or else hay-tea ; sometimes of the two combined ; to the nutrient properties of which, the hay-tea in particular, I have reason to believe he owed for the last fortnight of his existence his principal support. It may not be out of place to state here, that the hay-tea was given to this subject in consequence of what appeared in *Veterinarius'* Communication in the First Number of the Veterinarian ; and that the infusion was made by pouring one gallon of boiling water upon lbs.iv. of hay, cut into chaff, and suffering it to remain in a covered vessel until it became cold : this was mixed with four times the quantity of cold water, and either given alone, or thickened with gruel.

The natural consequence of this cudding or disgorgement of food became manifest shortly after he was placed under my care : almost daily I seemed to see my patient losing flesh, and to be turning from a lively, gay, spirited animal into a dull moping creature, indifferent alike to all around him, unless whenever the man came with a supply of fresh food. His skin now felt as if approaching to a state of hide-bound, and his coat, losing its former smoothness and gloss, turned rough, harsh, and arid, and became in places scurfy.

The bowels for the first two or three weeks required continual doses of aloes, which were combined with calomel, to keep them soluble, such a tendency had he to constipation : latterly, however, diarrhœa supervened, which I found myself compelled to check with chalk-balls, and on one occasion with opium.

The pulse ranged for the most part of the time between 50 and 60 ; seldom exceeding the latter number, or falling below the former.

He lay down most nights, and sometimes was found lying

during the day. His extremities were generally cold : his mouth hot and dry.

On the 11th of January, reduced almost to the extremity of emaciation and debility, he was shot.

The treatment consisted in the first instance of occasional, but small venesections; doses of aloes and calomel and nitre, compounded with common treacle: clothing warmly; flannel-bandaging, &c. Towards the end of December, imagining there might be some chronic visceral disease, his sides were blistered, and subsequentlyfour setons, two into each, were introduced. All appeared to have little or no avail: his complaint, whatever it was, was daily consuming his flesh and strength; and, every time I visited him, served as a reproach to me, either for my own ignorance, or the defective state of the art I professed to practise.

On dissection, I found the cardiac orifice of the stomach contracted to such a degree that a sharp-pointed knife could hardly be forced through it to slit it open, and the contiguous portion of the esophagus thickened and indurated; but, above all, the muscular fasciculi surrounding the opening and thence diverging over the cuticular coat, attracted notice: many of them were so prodigiously augmented as to equal in volume my little finger; indeed, every part of the tunic investing the cuticular pouch had grown morbidly thick in substance, but most remarkably so around the cardia. The internal or cuticular lining was thrown into unusually large and thick rugæ; but, otherwise, presented nothing remarkable in its aspect.—The thoracic and other abdominal viscera were sound.—The brain was not inspected.

It may not be amiss to add, that the only case similar to the above which has come to my knowledge is the one I have noted in my "Lectures," Part II. page 391.

William Percivall.

SHY HORSES.

MR. EDITOR;

SEEING a gentleman thrown from a horse that started from something in the road, led me to reflect on the subject of *shy horses*. I have often thought horses shy and start in consequence of some imperfection in vision, and not from obstinacy or perverseness, as grooms and jockeys affirm; and that the failing frequently consists in the prominency of the globe of the eye—in anatomical language, in the convexity beyond certain prescribed limits of the *transparent cornea*. We all know that persons who are near-sighted frequently (in twilight particularly) start and stop, and imagine they are running against objects, when in reality there is nothing in their way. If this be the nature of the case, a question arises, how is it to be remedied? The obvious reply is, by lessening the prominency—rendering the transparent cornea a nearer approach to a flat surface. Then comes another question, how is this to be accomplished? An idea has struck me (perhaps a very improper and absurd one) that it may be effected by letting out the aqueous humour; the cicatrix afterwards formed would certainly tend to lessen the convexity of the globe, and probably thereby render the animal less myoptical. Of course, such an experiment would only be had recourse to in extreme cases. After the human eye has been the subject of operation for cataract, either extraction or depression, the globe becomes invariably flattened in consequence, and the patient is necessitated to wear very convex glasses: but I write for information, not to instruct, and shall feel obliged by any of your correspondents communicating their opinions on the subject.

However, let the evil arise from whatever source it may, I am convinced that using force and coercion, spurring and whipping, to get the animal to approach the object of alarm, is as absurd as cruel: the idea that it arises from obstinacy in the animal can only spring from ignorance. Lenient usage, coaxing, I should think much more likely to succeed; although, I apprehend, I shall not induce grooms and stable-boys to come into my way of thinking.

Ω.

Those who are in the habit of riding along frequented roads or through the streets of populous towns, and whose object is expedition and safety, can best estimate the inconvenience, annoyance, and constant apprehension occasioned by a shy hackney: while walking, perhaps with an air of the greatest unconcern, and such a carriage as inspires his rider even with confidence, all in an instant, planting himself in an attitude of affright, he makes "a dead stop," as though an electric spark had passed through his body and fixed him motionless to the spot. Of the sensations of the animal at such a moment we will not just now venture upon a description; but we know by experience too well what those of the rider are to think slightingly of a subject to which the preceding letter has for the first time called our attention, and induced us to make these few cursory observations.

We take it that shyness in horses is the genuine offspring of fear: in man, it may have various other origins; some say it is grounded in pride; others, that it is a step to madness, since it leads a person to shun company and spend his time in solitude. Fear is the emotion excited by the suspicion, apprehension, appearance, or approach of danger: the hare is the most timorous, and probably we may add the most suspicious animal in nature, considering how near to our dwellings it often takes up its abode; and this shyness or fearfulness may be said to be innate, perfectly natural to the species, and in a great measure inseparable from it; for, although by domestication, by indulgent feeding, and kind usage, we may render the animal familiar with certain persons and certain objects, still, it is ever ready to take alarm at every new object or unusual action or sound, and thus is continually reminding us of its instinctive and unbanishable timidity. This we may denominate *native timidity*, giving rise to that kind of shyness with which foals and young animals in general are for wise purposes endowed, and which many, in spite of all that can be done to domesticate

and familiarize them, retain in a greater or less degree through life.

Opposed to native or instinctive timidity, we may set *acquired timidity,* or that which is engendered by the remembrance of what has already, and probably more than once, been productive of pain or uneasiness of some kind, and hence given rise to shyness. To give a familiar illustration of these two divisions or (if they may be so distinguished) species of timidity—a horse is naturally shy at any object of imposing appearance either novel or strange to him ; or he may manifest the same feeling at beholding an object with which he is perfectly familiar; at least (to qualify our meaning here) he may evince as much unwillingness to approach a place or object which he associates with some former suffering, as one he has never seen before. We do not mean to assert that these manifestations of fear are alike, further than that they arise from the same impressions, a dread or consciousness of danger, in the one instance acquired, in the other ingenerate, and that they both are confounded in what is vulgarly called "a shy horse." Let a horse be put up often and fed at any certain place on a road he is in the habit of going, and he will not afterwards pass the place without manifesting great inclination to stop there again ; on the other hand, let a person stand concealed at some spot and not fail to spring forward and whip or annoy the animal every time he passes, and never afterwards will he go by without looking earnestly and suspiciously towards the spot, and probably shying and starting from it altogether.

There is yet another cause to which shyness is ascribable ; and that is imperfect vision. A horse whose eyesight is defective is apt to mistake one object for another, or he may not be able to see sufficiently to make the distinction until he has approached very close to the object or he has put his nose to it : such an animal is nearly in the same predicament in which the unbroke colt is ; either the object really is, or he fancies it is,

strange to him, and he is afraid of it, and consequently shies at it.

This leads us to the particular part of the subject taken up by our correspondent; and, certes, it is, in a veterinary point of view, the more interesting, useful, and practical part; but it was necessary, we conceive, to enable us to answer his queries with some show of reason and experience, to enter, with no less brevity than we have done, into the philosophy of shyness and its parent, fear. No one, we presume, will affect to deny that imperfect vision is a cause of shyness: that horses grow shy as they grow old is too well known to need elucidation, and that this does not arise from *cunningness*, according to the notions of the crafty groom, is a fact equally demonstrable to a veterinarian or experienced and sagacious horseman, who knows that horses, like men, evince timidity and other failings as they advance in years, and that many of these are ascribable to the decay consequent upon age in the organs of vision. This however is not the point brought into question by our correspondent, or at least not that on which he seeks information: for decay from age would be irremediable; whereas the defect concerning which he has written he conceives to admit of remedy, and indeed has suggested one for it.

But, now that we have got so far, let us be cautious how we proceed. Is it an admitted fact that shyness has its origin in "prominency of the globe of the eye?"—in technical language, in preter-natural convexity of the transparent cornea? It is believed that such exuberance is a cause of near-sightedness in men; but have any, or can any, well-authenticated accounts be brought forward to show that the same thing happens in horses? rather, has not analogy (that bridge so inviting to cross but so dangerous to pass over) led us first to imagine and afterwards to believe this? We are not saying, nor do we wish any one to think, that there are no instances on record: we merely take the liberty to question the fact, not being ourselves in posses-

sion of any; at the same time, we should feel much satisfaction in being made acquainted with such occurrences, and still more in being among the first to publish them. Our correspondent will excuse the liberty we take with this part of his communication: we are dealing with him, we conceive, as he wished to be dealt with, when he added "he wrote for information, not to instruct."

With all this doubt in our mind about the state of this supposed fact, we must confess we are little inclined, or perhaps little prepared, at this moment, to enter into either the rationality or practicability of the proposed mode of reducing the convexity of the transparent part of the eye: however, we will offer a few observations on the last part of our correspondent's letter, and in them convey as much wholesome and practical advice as lies in our power.

We have lived long enough, and been practically acquainted with horses years enough, to learn that violence and punishment, generally speaking, are not the most suitable or likely means to impel the animal to do that which he is unwilling to do, let his disinclination arise from fear or any other cause; at the same time, we grant that there are circumstances and times and subjects in which the whip and spur may with advantage and ought to be used—nay, are indispensable: all we wish to contend for in this sweeping decrial, is, that whip and spur are both employed much too often. The case before us, according to our notions and experience, is certainly not one in which that punishment, miscalled correction, can be applied with advantage. And to show that it is not, let us, first, look at the practical effects of it; and afterwards, offer some reasons which appear to arise out of what we have advanced on the philosophy of shying, why it should be not.

We will suppose a case, a very common one, an every-day one. A man is riding a young horse upon the high road in the country and meets a stage-coach; what with the noise, the

bustle, the imposing appearance of the concern altogether, and the slashing of the coachman's whip, the animal at its approach, erects his head and crest, pricks his ears, looks affrighted, and no sooner comes alongside of the machine than he suddenly starts out of the road. His rider, annoyed by the saltation, instantly commences a round of castigation with whip, spurs, and curb, in which he persists until the horse, as well as himself, has lost his temper, and then one whips, spurs, and pulls, while the other jumps, plunges, frets, and throws up his head, until both, pretty well exhausted by the conflict, grow tranquil again and proceed on their journey, though not for some time afterwards in their former mutual confidence and satisfaction. Should they in their road, and particularly before this ferment has subsided, meet with another coach, what is the consequence? That the animal not only shies and starts with even more alarm than before, but now, the moment he has started, conscious of his fault, and expecting chastisement, he jumps about in fearful agitation, making plunges to strike into a gallop, and attempts to run away. So that, by this *correction*, instead of rendering his horse tranquil during the passage of a coach, the rider adds to the evil of shying that of subsequently plunging, and perhaps running away.

"Lenient usage, coaxing," says our correspondent, "I should think much more likely to succeed:" and so must every man think who has made trial of both modes of treatment. If it be true that shying has its origin in timidity, alarm, or fear of any kind, that which tends to remove such impressions, or to familiarize the feelings to the causes exciting them, so that they no longer produce such effects, must be the remedy; and not that which adds to the impression of fear the dread of punishment! We have often heard it said that the most effectual way to make a mongrel or a cowardly dog fight, is to place him before his antagonist in such a situation that he cannot possibly retreat; but we never heard any one irrational enough to recommend that he be beaten at the same time: and yet we flog a horse for being

afraid to do that which we desire him to do! Reason and experience both equally forbid the practice; and therefore we may rest assured that it is erroneous; and we may add with our correspondent, "cruel." We do not pretend to more humanity than other people; we are not disciples of Martinian philanthropy; but we have a silent contempt for the low cunning of the stable, and hold that individual at but a small price who suffers such to be his guide rather than reflection and experience. It is our duty to act mercifully, or at least reasonably, towards an animal so noble in kind, so beautiful in form, so useful, so agreeable to us; nay, gratitude demands it; and low indeed does that man let himself down in the scale of rational and merciful beings who disregards the plaintive murmurs and ineffectual resistance of the poor beast which chance has thrown into his possession. At another time we will enter more into particulars concerning the means that appear best adapted for breaking horses of shying.

E. V.

A CURE FOR THE GLANDERS.

MR. EDITOR;

AN event so important not only to the Veterinarian but to the inhabitants of every part of the globe where horses exist, will, I apprehend, be a sufficient passport to your valuable Journal without further apology.

A Cure for the Glanders!! Yes, Mr. Editor, so Mr. Sewell, the Sub-Professor of the Veterinary College, wants to make it appear; as, in his Introductory Lecture, he boldly announces that devastating and all-devouring disease in horses, to be under the controul of his eminent veterinary skill. Now, Mr. Editor, if I could make it out that this was a true bill, I should be one of the first to join in a verdict of praise and pride, that so momentous a discovery should have fallen to the lot of an Englishman; and if, again, such were true, Mr. Sewell's name would be immortalized! But, Sir, how does the fact stand? Why,

Mr. Editor, the Sub-Professor has set his musical Key to this delightful Song, which he has been singing on every occasion to the favourite tune of *Blue Broth under the Border* for the last seven years, and although the music has been so well managed as to tickle the ears of the Governors of the Institution, still, I am fully persuaded, should the Sub-Professor not possess musical skill enough to set his forthcoming *Tuberculous Overture* (which he advertized in the daily News Papers some four or five years ago) to new music, the old one will soon be put upon the shelf, in sub silencio, and lost sight of for ever. As some reason may be expected for this prediction, I will ask—Does Professor Coleman join in a Duett with him in this Phantasma? If he does, let him avow it; as yet I have always heard him deny Mr. Sewell's power of curing Glanders. A train of experiments for seven years at the Veterinary College under the eye of the Professor, besides those made by other Veterinarians, is I apprehend enough to incline the Governors to pause, and allow this notified *solo* to go off the stage without calling out *encore;* for, be it known, Mr. Editor, that Mr. Sewell has had his salary augmented, and has been remunerated in other ways by the Governors, for this supposed power of curing the Glanders. But, should it turn out to be a stumped-up hack of Mr. Sewell's, (and for aught I see and hear it is nothing more), why then let him ride it until it be worn out. But the Governors I think were premature in voting the money of the Institution before satisfactory evidence of the discovery had been laid before them; on the contrary, if it had been ample and conclusive, and had been borne out by the testimony of Professor Coleman and the Profession, then I say any remuneration the College could bestow would be far below what ought to be given.

VETERINARIUS.

London, Feb. 1828.

GASTRITIS.

To the Editor of the Veterinarian.

SIR;

IT is with infinite pleasure I perceive the First Number of your periodical Journal published. I have not the least doubt that great benefit will be experienced by the Profession through its medium; as it appears very obvious that something of the kind is wanting, not only in being the cause of correcting

many abuses within the Veterinary College, but to rouse from their apparent lethargy the *Heads* of that Institution, and excite them to acts more laudably great than any they have hitherto been in the habit of performing. In reading your introductory paper in the First Number, I was much pleased to find it done with so proper and independent a spirit; under such management I doubt not that your Journal will widely circulate, and eventually raise the Profession to great respectability.

I am, Sir,

Your humble Servant,

N. B.

Jan. 1828.

P.S. Herewith I transmit you a few cases of Gastritis, occasioned by the Horses eating Haws from the Thorns in the Hedgerows: if you think them worthy of a place in your valuable Journal, I shall feel obliged.

During the autumn of the year 1826 I was called professionally to six cases of Gastritis, all showing symptoms precisely the same. The pulse threaddy and scarcely perceptible; extremities cold; skin covered with a dewy perspiration; respiration remarkably quick; at intervals the stomach violently contracting, and when that took place, large quantities of the fluid part of its contents ejected through the nostrils, having a peculiar acid odour: medicine given in a fluid state was also expelled, in the same way. Bleeding seemed to give relief, but it proved transitory; medicine was of little avail, and generally, within the space of from six to eight hours after I had been called in, the animal died.

On examining the viscera of the abdomen, I discovered some patches of inflammation upon the duodenum; but the stomach and omentum were so highly inflamed that they had quite a purple appearance; when the stomach was laid open the cause of the disease was very evident. In each case this viscus contained a very hard substance, consisting of Haws and small pieces of the Thorn, about the size of a goose's egg, having a rough uneven surface. When the stomach was completely emptied of its contents, the villous lining presented marks of the most intense inflammation; but all around the pyloric orifice the coat was lacerated in various directions; no doubt in consequence of the contraction of the stomach, having a natural tendency to direct the substance to that part, in which by its rough surface it inflicted wounds.

It is very singular that the autumns of 1825 and 1827 did not

produce similar cases, at least within my own observation; and the only way I can account for it, is, that there was a greater scarcity of grass in 1826 than in either of the other two seasons. The Horses that had the disease were young, from two to four years of age: the scarcity of grass in all probability induced them to feed on the haws and pieces of thorns.

BROKEN WIND.

THE following case was communicated by a Surgeon in Devonshire, a gentleman who has paid much attention to Veterinary Study.

"A little mare of my father's was many years since ridden rather sharply for half-a-dozen miles. This was in summer; consequently she was in all probability full of grass. Be that as it may, she soon after exhibited the symptoms of broken wind. At length she died rather suddenly, whilst standing in the stable. I ought to have mentioned that the cough was the most curious apology for a cough you ever heard: it resembled nothing so much as the short breathing of a child under pulmonary inflammation. On examination, it was found that the diaphragm was lacerated on the left side through its whole extent, throwing the two cavities into one. The laceration appeared recent; but I should think it must have been in part old: what should you say? The lungs were dark-coloured and collapsed: the edge of each lobe to such a degree, that those parts were not inflatible, though air could be made to pass when they were cut through. No air underneath the pleura pulmonalis. Heart and large vessels quite healthy. Posterior surface of the diaphragm on the left side shewed signs of former inflammation: its peritoneal covering had become altered in structure, and was here and there studded with coagulable lymph. The examination was made by my father.* I wrote him a long list of observations on the case; but I shall not send you any until I have heard what you have to say: so remit me your thoughts on the subject."

It appears from the above account that the mare had been

* Who is also a Surgeon.

broken-winded some years prior to her death; and yet, on examination of the lungs, the appearances usually regarded as belonging to—as indeed the proximate cause of that disorder, were not observed to be present. However questionable the present theory of broken wind may appear to be, one fact appears to be established; which is, that the malady consists in some irreparably deranged state of the mechanical functions of respiration; and therefore, the diaphragm being one of the principal agents engaged in this function, it need excite no surprise that interruption or impediment from any cause in the action of that muscle should produce symptoms analogous to those of broken wind, as was the case with this mare. The most remarkable symptom in the disorder is the tedious, laboured, and difficultly accomplished expiration; which in the case before us would arise from the imperfect and unequal manner in which the diaphragm on the rent side could be made to exert pressure against the lung; at the same time, we should expect that the mare experienced embarrassment also in inspiration, a circumstance not present in a case of genuine broken wind. Her death seems to have been owing to a sudden extension of the rupture, and consequent defectiveness in the action of the diaphragm, to such a degree as to occasion suffocation.

E. V.

VETERINARY EDUCATION.

To the Editor of the Veterinarian.

SIR;

AMONG the defects of the present system of education at the Veterinary College, I know of none that requires a speedier remedy than the total neglect of the Anatomy, Physiology, and Diseases of Cattle, Sheep, and all our domestic animals except the Horse.

This defect is not attributable however to the original constitution of the College, nor is it to be charged on the Professors.

The practice of this Seminary was meant to extend to every domesticated quadruped ; but they were never sent to the College, and the Professors could acquire no experience in the treatment of their diseases. The consequence is that not only the practice, but the instructions at this Institution are confined to the Horse alone.

In all other countries the education and practice of the Veterinary Surgeon extend to every animal subdued by man, and rendered useful to him. The English Veterinarian is, I fear, not only inferior to his continental brethren in the knowledge of the horse, but is unfortunately doomed to utter ignorance of the economy and diseases of every other animal.

I do not blame the Professors of our College for this. Without practice they could not obtain experience, and without experience they were too prudent and too candid to expose themselves or mislead their pupils.

Whatever be the cause of this evil, it is however much to be lamented, and it behoves the Governors of the College to rectify it without delay.

Justice to the student requires this. Conceive a young man settling in the country, and his ultimate success depending on the impression which he makes at first. He is consulted by a well-informed and wealthy grazier respecting a disease which is destroying some of his most valuable cattle. Our poor student has never been taught the nature of the disease, its medical treatment, or even its name. If he undertakes the case, he will probably, or certainly, disgrace himself by a succession of blunders ; and, if he honestly confesses his ignorance, the grazier will think meanly of his professional acquirements, and of the school whence he came. This is a situation of mortification and debasement in which the Veterinary Surgeon should not be placed.

The interest of the Agriculturist more imperiously demands an improvement in the education of the Veterinary Pupil. Great Britain contains about a million and a half of horses, for the medical treatment of which the College annually grants diplomas to more than fifty Students, and the country greatly acknowledges the benefit conferred.

It likewise contains more than five millions of neat-cattle, four millions of swine, and thirty millions of sheep, for the study of whose ailments no Professor is provided,—no Surgeon is educated. These animals, constituting, even more essentially than the horse, the wealth of the kingdom, are not deemed worthy a single lecture !

Three sheep in every hundred die annually of the flood ;

three of the rot; and, probably, two of other diseases—eight in every hundred are lost to the farmer. Thus three millions sterling are to be subtracted from the property of the Agriculturist, and the riches of the State.

I will not say that the best instructed Veterinary Surgeon would save to the grazier the whole, or the greater part of this immense sum; but if the care of our domestic animals were taken from those who are proverbial for their brutality and their ignorance, and entrusted to men who had studied the anatomy, and economy, and diseases, and general treatment of sheep and cattle, much good would inevitably result. The Veterinary College has done much to ameliorate the condition and lessen the diseases of the horse; and our other domesticated quadrupeds have an equal, and, in point of aggregate value, a superior claim on the attention of its Professors and Governors.

While the College thus abandons them, it is notorious, that we have not a book on the diseases of cattle that is not the subject of well-deserved ridicule and bitter sarcasm, among our neighbours, and which does not disgrace us as Veterinarians and even as common Farmers.

In the French Colleges, Professors are appointed to instruct the pupils in this important but neglected branch of study. Grazing farms are likewise attached to each of these seminaries, that the young surgeon may observe, and be habituated to the management of sheep and cattle in health as well as disease.

Whether, considering the situation and constitution of our College, the latter plan be practicable here, I will not determine; but of this I am assured, that the establishment of a system of instruction on the diseases and treatment of sheep, cattle, and all other domestic animals, if it did not speedily bring practice, would, at least, be an important addition to the study of the pupil, and prepare him for the more extensive and more reputable discharge of the duties of his profession, and most materially benefit the community.

I trust the time is not far distant when they, who have the power and the wish to do right, will perform an act of justice to the Veterinary Student, and of incalculable advantage to the country at large. I am, &c.

PHILO-VET.

Feb. 12, 1828.

Cases or Communications, addressed to the *Editor of the Veterinarian,* at the *Printer's,* (post paid) will meet with due consideration.

John Hill, Printer, Black Horse Court, Fleet Street.

THE

VETERINARIAN.

VOL. I. APRIL, 1828. No. 4.

ANATOMY OF THE HORSE.

(Continued from page 71.)

GENERAL REMARKS ON THE VERTEBRAL CHAIN.

THE Spine exhibits for consideration four surfaces and two extremities.

SURFACES—Extremely irregular, presenting various eminences and projections, hollows, grooves, and foramina.

Superior Surface—In the neck, broad and (from the absence of spinous processes) preserving a general level; the equality being interrupted only, anteriorly, by the spinal crest of the vertebra dentata; posteriorly, by the spine of the seventh vertebra. In the back and loins, the surface offers a continued series of spinal projections; long, with broad tuberous ends, sloping backward, in the withers; short, erect, with broad sides, and terminated by oblong ridges, posteriorly. On the sides, running close to the roots of the spinous processes, extending from the dentata to the last lumbar vertebra, are the vertebral grooves, filled by the spinal and semi-spinal muscles belonging to the neck, back, and loins.

Inferior Surface—Presenting great uniformity from the general regularity of the inferior cervical spines and also the angular portions of the bodies of the dorsal and lumbar vertebræ; excepting, that the sixth cervical spine is defective, and that the one or two last lumbar vertebræ are flattened inferiorly.

Lateral Surfaces—Very irregular. Presenting, in the neck, broad, bifid, transverse plates, with capacious vertebral channels or grooves between them and the articulatory processes above, which are occupied principally by the complexus major. Underneath these grooves run the foramina for the vertebral blood-vessels; and through their sides pass the holes of conjugation.

—In the back and loins the holes of conjugation are situated immediately behind the transverse processes; and the lumbar vertebræ alone possess lateral vertebral grooves, but which are very narrow compared with those along the neck.

Extremities—Broad and articulatory. The anterior excavated to receive the occipital condyles; the posterior, transversely oblong, presents three smooth surfaces for articulation with the sacrum.

Vertebral Canal—Capacious and semi-oval along the neck; transversely oval and small along the back; semi-circular along the loins, and of greater diameter than in the back, less than in the neck. United, anteriorly, with the cavity of the cranium; continuous, posteriorly, with the sacral canal. Containing the spinal marrow and its membranes.

II.—THE CHEST. (THORAX.)

The thorax or chest is the ample conoid cavity constituting the anterior part of the trunk, formed by the ribs laterally and the sternum inferiorly, in which are contained the organs of respiration and circulation.

THE RIBS. (COSTÆ.)

Number. Thirty-six; ranged in pairs, 18 on either side: occasionally there exist 38, and even 40 ribs. They are distinguished by their numerical order, counting from before backwards.

Conformation. In general similar: they are elongated, curved or twisted, convex along their outer sides, concave along their inner, and taking a direction from within outwards and from above downwards; they vary however in their length, degree of curvature, and obliquity of direction.

Division. Into true or sternal ribs, and false or asternal; the former, nine in number, being those whose cartilages are actually inserted into the sternum; the latter, the remaining nine, being only connected therewith through the intervention of others. Each rib possesses two extremities, two surfaces, and two borders.

Extremities. The superior or vertebral comprehends—1. The head, the protuberant or antero-superior portion, presenting two convex smooth surfaces, for articulation with the bodies of the vertebræ between which it is received, and these divided by a rugged notch, into which is fixed the interarticular ligament of the head. 2. The neck, the contracted part, supporting the

head. 3. The tubercle, the prominence behind the head, at the root of the neck, which has a flat smooth surface for articulation with the transverse process of the hinder vertebra connected with the head. 4. In front of the tubercle, running across the back of the neck, is a groove, along which make their exit branches from the intercostal vessels and nerves. The inferior or sternal extremity swells a little in volume, and is of less compact or more porous texture than the bone above: it is terminated by an oval roughened depression; from this takes root the cartilage of the rib, which thence proceeds at a more or less obtuse or rounded angle towards the sternum.

Surfaces. The external is convex and more or less uneven. The ribs do not form regular arches; they project outwards from the spine, and then curve suddenly downwards, the posterior ones at the same time inclining backwards: the place where the rib commences its descent, the most convex or crooked part, is named its angle. In all the long ribs this surface anteriorly is more or less grooved for the attachment of the external intercostal muscles.—The internal surface is uniformly concave, smooth, and polished. It is lined by the pleura.

Borders. With the exception of the first and last ribs, the anterior borders are thin and sharp; the posterior, obtuse and rounded: the former give attachment to the intercostal muscles; the latter, along the upper half however only, present grooves in which run the intercostal vessels and nerves.

Peculiarities. The first is the shortest and thickest of the ribs; its upper part is rounder, and its lower broader and more expanded than any other: it is but little and irregularly arched, and the concavity of its arch is turned directly forwards. The second is a remarkably straight rib, being only curved in its neck. From the second the ribs progressively increase in breadth to the seventh, in length to the ninth, and in curvature to the very last; the eighteenth being in proportion to its length the most crooked rib: from the tenth, the ribs grow shorter, narrower, and more obtuse or rounder in their borders. The posterior differ also from the anterior ribs in being curved throughout their entire length; whereas the former are only very perceptibly bent at their angles. In the eighteenth, and sometimes in the seventeenth rib, the articulatory surface of the tubercle is confounded with that of the head, and the neck is wanting.

The Cartilages of the Ribs, properly so called in the young subject, receive depositions of osseous matter as the animal advances in life, and at length acquire rather the character of spongy fragile bones than cartilage. They correspond in

number to the ribs, and like them increase in length from the first to the ninth or tenth, after which they progressively decrease; but this is liable to variation: the first cartilage is remarkably short. Those belonging to the true ribs are in general not very long, but broad, thick, and resisting; those proceeding from the false ribs are on the contrary mostly very long and comparatively slender, and incapable of offering much resistance—are in fact so formed and connected that they admit of considerable motion.

THE BREAST-BONE. (STERNUM.)

Conformation. The sternum (being a single bone) is symmetrical in its form, shaped, altogether, like the keel of a ship; posteriorly, flattened from above downwards; anteriorly, from side to side. It is composed of seven irregularly formed bones, and of the ensiform and cariniform cartilages.

Division. Into four surfaces and two extremities.

The Superior and Inferior Surfaces are pyramidal in figure, being broad posteriorly, contracted into borders anteriorly: the former, slightly concave, terminates between the cartilages of the two first ribs; the latter, irregularly convex, ends in the cariniform cartilage.

The Lateral Surfaces are broader anteriorly than posteriorly. The three foremost bones present broad, superficial, lateral concavities; the four hindermost, projecting lateral borders, which incline downwards and form the boundary lines between the inferior and lateral surfaces. The indentations upon the fore and hind parts of the separate bones, form, in the united state, lateral concavities for the reception of the cartilages of the ribs: the hindermost bone, itself, receiving two entire cartilages.

The Extremities are constituted of projecting cartilages.—*The Cariniform Cartilage,* arising in a curve from the inferior border, forms a prominent and remarkable convexity in front, flattened on either side, and affords attachment to the sterno-maxillares and sterno-thyro-hyoidei.—The *Xiphoid* or *Ensiform Cartilage* is fixed to the last bone, and assumes a form in some measure correspondent therewith, being broad and flattened above and below: it is terminated however by a thin border, to the figure of which it owes its name, though this is subject to much variation.

GENERAL REMARKS ON THE THORAX.

Form. That of a truncated cone slightly incurvated, the

basis of which is cut obliquely, from above downward and from behind forward; the point of the apex cut off perpendicularly; the axis running in a direction from the front backward and downward.

Dimensions. The antero-posterior diameter is the greatest. As we approach the apex the perpendicular more and more exceeds the lateral measurement; towards the basis, in consequence of the sides diverging, these two diameters become about equal.

Division. Into two surfaces and two circumferences.

Exterior Surface—Presenting, anteriorly, the projection of the cariniform cartilage of the sternum, with its sharp edge turned downwards, affording attachment to the pectoral muscles; laterally, the convexities of the costal arches and their cartilages, and between them the intercostal spaces filled by the intercostal muscles; superiorly, the dorsal spines, transverse processes, and vertebral grooves; inferiorly, the sharpened lower border of the sternum, terminated by the xiphoid cartilage.

Interior Surface—Formed, below, by the incurvation of the sternum and xiphoid cartilage; on the sides, by the smooth concavities of the ribs together with their cartilages; above and along the middle, by the angular, smooth, descending portions of the bodies of the dorsal vertebræ; above and along either side, by an oblong fossa formed by the angles of the ribs, into which are received the superior thick borders of the lungs.

Anterior Circumference—Perpendicularly semi-oval, the small end turned downward; bounded by the first dorsal vertebra, the first pair of ribs, and the sternum; making a passage for the trachea, esophagus, longus colli, carotid arteries, jugular veins, vertebral arteries and veins, axillary arteries and veins, par vagum, sympathetic and recurrent nerves, and thoracic duct.

Posterior Circumference—Wide, but most extensive from above in the antero-inferior direction; bounded by the last dorsal vertebra, the ensiform cartilage, the two last ribs, and the false cartilages; affording attachment to the abdominal muscles, but more particularly to the diaphragm, by which the intervening space is occupied.

III.—THE PELVIS,

Forms the posterior boundary of the trunk; is connected with the spine, and supported by the femoral bones; presents a large, irregular cavity, open before and behind, in which are contained part of the intestines, and the urinary and genital organs; and is composed of four bones:—the sacrum and os coccygis, and the two ossa innominata.

THE RUMP-BONE. (OS SACRUM.)

Situation. At the superior part of the pelvis, continued from the vertebral chain between the ossa ilia.

Figure. Resembling the lumbar portion of the spine, from which it declines with a slight bend, presenting a convexity externally, a concavity internally, thereby augmenting the area of the pelvic cavity.

Division. Into two surfaces, two borders, a base, and an apex.

Superior Surface. Very irregular. Presenting, 1*st*. On the mesian line, five considerable eminences, corresponding to the lumbar spines, from which they differ in sloping in an opposite direction, in increasing in breadth, while they diminish in length, from first to last. *2ndly*. Laterally, two superficial grooves, pierced by the four superior sacral foramina, through which pass out the superior sacral nerves.

Inferior Surface. Regular, smooth, and slightly concave. It presents—Four transverse lines of demarcation, denoting the original division of the bone into four separate pieces. These are bounded laterally by two superficial grooves, pierced by four pairs of inferior sacral foramina, through which make exit the corresponding sacral nerves.

Lateral Surfaces. Thick anteriorly, growing thin posteriorly, and presenting slight protuberances, corresponding to the vertebral transverse processes, which serve for the attachment of the sacro-iliac ligaments.

Base. Composed of a middle and two lateral parts. The middle presents a convex articulatory surface, transversely oval, for adaptation to the last lumbar vertebra; surmounted by two articulatory processes, between which are received the two last of that name of the loins; and having on its sides two notches of conjugation for the last pair of lumbar nerves. The lateral or anterior transverse processes, broad, thick, and projecting, and triangular in figure, point forwards and upwards as well as outwards: superiorly, they have two surfaces of articulation for the ossa ilia; anteriorly, two others which unite with the last transverse processes of the loins.

Apex. Presents also an oval surface, which articulates with the foremost bone of the tail; having on its sides two notches, for the fifth pair of sacral nerves; and, farther removed outward, two little posterior transverse processes.

The Sacral Canal for the spinal marrow is triangular in figure, and gradually contracts its diameter from before backwards.

Development. In the young subject this bone consists of five distinct and separable pieces, united, one to another, by a fibro-cartilaginous substance which in the adult is converted into bone.

THE TAIL-BONES. (OSSA COCCYGIS.)

Situation. Behind the sacrum, to which the coccyx forms an appendix.

Form. Conical, elongated, and more or less curved.

Conformation. The coccyx or tail is constituted of several small bones resembling vertebræ, varying in size and development, and also in number from thirteen to eighteen.

Division. As a whole, the coccyx presents for consideration two surfaces, two borders, a base, and an apex.

Superior Surface—Convex. The two and sometimes three first bones possess complete bony arches, from which arise one or two spinous eminences giving attachment to the erectores coccygis, and consequently they possess an entire spinal canal; in the following two or three pieces, the spinal arch becoming gradually more defective, the closed canal degenerates into a channel open superiorly, and that in the four or five subsequent pieces into a simple groove; until at length all traces of such formation disappear.

Inferior Surface—Concave. The first bone possesses breadth and flatness inferiorly, the same as a lumbar vertebra: the others display less and less of the vertebral character back to the fifth or sixth, after which they present angular borders. Into these parts are inserted the depressores coccygis.

Lateral Borders. The three or four anterior bones have transverse processes, increasing in length with their priority; which give attachment to the sacro-sciatic ligaments, and also to the curvatores and compressores coccygis. The fifth and subsequent bones are nothing more than cylindrical forms, and differ in little else than in a regular respective diminution in volume.

Base—Presents an oval surface for articulation with the end of the sacrum; and also two little articulatory processes, receiving between them correspondent sacral eminences; and below these processes two notches, for the transmission of the fifth pair of sacral nerves.

Apex—Obtuse and rounded off.

THE HIP, HAUNCH, OR EDGE BONES. (OSSA INNOMINATA*.)

Situation. Forming the lateral and inferior parts of the pelvis.

* Literally, *unnamed* bones; but answering to the other English appellations

Form. Very irregular: large and flat; broad at the extremities, which turn in different directions; middle portion contracted.

Division. Into two surfaces and four borders.

The External or Dorsal Surface—Divided by the contracted portion in the middle into two parts. The anterior part, also distinguished as the dorsum ilei, is even and smooth, slightly concave, triangular in figure, and faces outwards and backwards: it affords attachment to the glutei, maximus et internus.—The posterior division presents, outwardly, the acetabulum or cotyloid cavity, hemispherical, nearly three inches in diameter, looking outwards and downwards, surrounded by a prominent lip of bone which is interrupted below by a notch, and having a roughened depression in its middle into which is implanted the round ligament confining the head of the os femoris within the cavity; above and in front of the acetabulum the bone is depressed and roughened in two places from the roots of the bifurcated tendon of the rectus femoris; to the inner side of and below the cavity is the obturator foramen, a large oval opening, closed by an expansion of ligament, through the anterior part of which is a perforation for the passage of the obturator vessels and nerves. Behind the foramen the surface is broad, even, and smooth, and gives origin to the abductor muscles of the thigh; above the foramen, it is smooth and rounded, over which part play the obturator internus and gemelli.

The Internal or Ventral Surface—Divided the same as the external. The anterior part faces inwards and forwards, is slightly but unevenly convex, has a superficial scabrous depression posteriorly, shewing the place where the bone rests upon, and has strong ligamentous attachment to, the transverse processes of the sacrum: the remainder of the surface below is occupied by the iliacus, the part above being opposed to the sacrum.—The posterior part is subdivided by a prominent border (upon which is a rough mark showing the insertion of the psoas parvus) into a small triangular superficial concavity looking forwards which gives origin to the sartorius, and an extensive but irregular one directed upwards; this last is much consumed by the obturator foramen, posteriorly to which the surface is remarkably smooth and slightly excavated for sustaining the bladder.

Anterior Border—Sigmoid in figure, slightly concave and thin in the middle; terminating, behind, in a sharp salient angle, the posterior iliac spine; before, in a thick quadrangular part which gives rise to four eminences: the two larger ones are the antero-superior and antero-inferior iliac spines; the two smaller, tubercles

or appendices to them. The border itself is called the crista ilei. It affords attachment to the longissimus dorsi, obliqui abdominis, externus et internus, and transversalis abdominis.

Posterior Border—Having its anterior third thick and scabrous, where it is united through the intervention of fibrous cartilage with its fellow, forming the symphysis pubis ; posteriorly to this, it grows thin, which part has also a ligamentous connection with the opposite bone, and afterwards recedes from its fellow, terminating outwardly in a thick, oblong, waving, roughened prominence, called the tuberosity of the ischium, to which are attached the adductor magnus, biceps femoris, and abductor tibialis, and also the sacro-sciatic ligaments.

The Superior Border—Extending from the posterior iliac spine to the ischiatic tuberosity, is waving in its course, forming an irregular semi-circle, and presents along its anterior two-thirds a sharp edge, which opposite to the acetabulum is roughened by the implantation of the sacro-sciatic ligaments ; after this it is rounded by the play over it of the obturator internus and gemelli, and at length ends insensibly in the tuberosity.—There is a lesser superior border which runs from the tuberosity to the acetabulum : the posterior half is prominent, very sharp, and irregular, forming the ischiatic spine.

The Inferior Border—Describes a sigmoid flexure : it extends from the anterior iliac spine to the symphysis pubis. Its anterior third is sharp ; about its middle is a medullary hole running backward ; here it gives rise to two borders : one obtuse and smooth, ending at the edge of the acetabulum ; the other, more prominent and sharp, is the linea ilio-pectinea, or brim or boundary of the cavity of the pelvis, running onward to the symphysis. Upon its anterior part is a rough place, the ilio-pectineal eminence, marking the insertion of the psoas parvus ; posteriorly are two rough eminences, with a groove between them wherein run the united tendons of the psoas magnus and iliacus : to the outer one, the pubic spine, is fixed the external chord of the abdominal ring.

Connection. Anteriorly and inferiorly with the sacrum ; posteriorly and inferiorly and in the middle with each other ; outwardly with the femoral bones.

Development. In the fœtus this bone is separable into three distinctly formed pieces :—the ileum, the largest division, the triangular plate in front ; the ischium, the part projecting backwards ; and the pubes, the inferior and middle portion. They all contribute to the formation of the acetabulum ; the ischium and pubes alone form the obturator foramen. These parts speedily complete their bony union after birth ; and the ischium and pubes the soonest.

DISEASES OF HORSES IN INDIA.

TO the two articles of "Worm in the Eye" contained in our last Number, we have much gratification in having it in our power to add a third and more digested account from the pen of a Surgeon in India, who has the superintendance of one of the Company's studs. The Society to which this paper was presented we believe to be the *Medical Society at Calcutta*.

OBSERVATIONS ON THE FILARIA OR THREAD WORM, FOUND IN THE EYES OF HORSES IN INDIA.

By W. Twining, Esq. *Presented October* 2, 1824.

IN presenting to the Society, observations and remarks on a singular disease incident to the eyes of horses in India, I am actuated by an earnest wish to conduce to farther investigations, which may possibly more fully develop the phenomena that usually attend it.

The worm, which is very small, is found alive in the aqueous humour of the eye: its existence in that humour is easily detected, and its local effects on the eye in occasioning a deep-seated inflammation of the globe of the eye, and turbidness in the aqueous humour, are well known in this country: but it is still hypothetical how the worm is generated in the eye. Horses affected with the worm in the eye are subject to weakness of the loins; and these incidents occur together so frequently, that the natives very generally believe the latter to be the consequence of the former affection.

When on a tour in Upper India, in December last, I saw a remarkably fine Arab horse, which had the aqueous humour of one eye of a bluish milky colour, and so turbid that the pupil was not visible; the lids were kept half closed, deep-seated vascularity of the eyeball was manifested, and there was redness of the conjunctiva, but no lacrymation. A few days afterwards, the worm was seen swimming almost incessantly in the aqueous humour, and its motions where somewhat similar to those of a leech in water. In the eye, this worm had the appearance of a white thread; but, owing to the turbid state of the aqueous humour, it was seldom seen, except it approached near the cornea.

This worm was extracted the day after its existence in the eye

was ascertained. The horse was cast, and his head secured on the ground; the lids were held open, and a lancet passed into the cornea a little below its centre. The aqueous humour spurted out, and brought with it the worm, which moved about briskly; but it died in about five minutes. After the operation, the horse was bled and purged, and a cloth wet with goulard water was kept over the eye. In fourteen days the upper half of the cornea was clear; at the expiration of a month, there remained a triangular opacity at the lower part of the cornea, equal to one-third its area; the apex of the opacity being opposite to the centre of the pupil; and there was a small speck just within the apex of the opacity, which marked where the lancet had entered, and around it a slight roughness of the cornea. Seven months after the operation, the opacity was equal to about one-sixth the area of the cornea; the horse was, (to use a common phrase,) much out of condition, had puffy swellings of the joints, a large elevated ulcer near one of the hoofs, and there also appeared weakness in the loins. I should have premised, that five or six weeks before any affection of the eye was observed, this horse had puffy swellings about the knee and hock joints, and assumed a dull spiritless aspect, but was not emaciated.

After extraction, the worm resembled a piece of fine white sewing thread, seven-eighths of an inch long. Viewed with a microscope, this worm had the appearance of a large semitransparent piece of catgut; there were five luminous spots, disposed circularly, near one end, which I imagine to be the head of the animal; below these spots there was an irregular luminous patch, in size nearly the diameter of the worm; and from this, two parallel lines of a similar appearance extended the whole length of its body. On the day this worm was extracted and examined the wind was remarkably dry, and consequently in a few minutes the worm became like a shred of isinglass, and I could not discover any aperture in its semitransparent substance. The end which I conceive to have been the head, and where the group of luminous spots was situated, was round, and very little larger than the other extremity, which was flat.

I have seen similar worms taken from the eyes of horses in Ceylon; they appeared to me to be of a darker colour, and somewhat larger than that which I now present for the inspection of the Society.

I may remark, that I have never seen a case where the cornea did not remain with some degree of opacity after the operation for the extraction of the worm; but I have heard it asserted, that the eye is often free from blemish, after it is per-

formed as above described. With respect to the operation itself, I would suggest the propriety of making the section near the margin of the cornea, as being less likely to cause extensive opacity; for, as I have already observed, the apex of the triangular opacity extends to the point where the puncture is made. Making the section now proposed would probably be attended with some difficulty, and be liable to objection; as the iris might be wounded during the operation, and would be liable to prolapsus afterwards, if the incision of the cornea were large.

The existence of a living worm in the aqueous humour of the eyes of horses, producing a turbid state of that humour, and deep-seated inflammation, is an interesting fact in its relations to the pathology of the horse; and to the natural history of the animalcule which causes a train of diseased actions, that have not hitherto been satisfactorily explained. The result of my inquiries leads me to believe, that destruction of vision is the invariable result of this disease, unless the worm be extracted. It is farther worthy of notice, that horses with the worm in the eye are often affected with debility of the loins. A knowledge of this circumstance would probably render individuals cautious in purchasing horses, whether for their own use or for the public service. However, I have known horses in Ceylon to have been active and serviceable many months after the extraction of the worm.

Some facts and observations by Mr. Breton relative to Filaria, already before the Society, afford sufficient proof of the frequency of this disease in the eyes of horses in India, and of its being attended with debility of the loins; but we have no proof of the immediate cause of the latter symptom, unless it be granted that a general affection of a specific nature is evinced in one part by debility of the loins, and in another by a worm in the eye.

As worms precisely similar to those in the eyes of horses exist also in the cellular substance of that animal, and are met with more particularly by the sides of the lumbar vertebræ in great numbers, I am of opinion that the debility of the loins may be ascribable to their presence in the cellular substance about the spine; and thus what appeared at first sight an extraordinary coincidence of different diseases in distant parts, may be no other than the same disease prevalent in the system generally.

Dr. Hardtman was the first person who informed me of the existence of these worms in the cellular substance, by the sides of the lumbar vertebræ; and, since his communication, I have received a letter from Captain Wyatt, of the Honorable Com-

pany's stud at Haupper, of which the following is an extract: —"There is no question of the fact Dr. Hardtman mentioned to you before, of the frequent existence of similar worms in the inside of the horse to those which are found in the eye, and which are seen alive and moving under the cellular membrane in different parts of the abdomen. I was myself often present during the dissection, and saw the worms as above described."

Referring to the Systema Naturæ of Linnæus, I find the *Filaria* described thus :—"Corpus teres filiforme, æquale, ore dilatato, labio subrotundo concavo." "*Filaria equi,* habitat in equini corporis cavis variis, telaque cellulosa."

In Sir Everard Home's Lectures on Comparative Anatomy, he says, the arteries of the ciliary processes in the horse are very large; and he is led to believe, that "the two species of worm, the *Strongylus Armatus,* and *Filiaris Papillosa,* found alive in the aqueous humour in that animal in India, get there through these arterial branches, more especially as they are known to exist in the circulating blood of that quadruped." Before this statement of Sir Everard Home, I was not aware that the Strongylus had been found in the eye of the horse. Under the head Strongylus, in the edition of Linnæus to which I allude, is this remark :—"*S. equinus.* Capite opaco, intestino nigro. Strongyli ovipari, hactenus non nisi in mammalium canali Cibario reperti."

In the arguments which I have advanced it is not contended that every horse having a worm in the eye must of necessity be affected with weakness of loins; nor that debility of the loins arises from no other causes than the presence of worms in the interstices of the lumbar muscles and behind the peritoneum. On the contrary, Mr. Moorcroft, it would appear, has found an accumulation of serum in the spinal theca of horses having partial paralysis; and probably other causes of the paralytic affection may exist. If we could ascertain that the Filaria exist in the canal of the spine, the information we solicit in regard to one cause of weakness of the loins would be attained.

The manner in which worms may be generated, or their ova arrive at those parts of the flesh or viscera of living animals where we find the worms, is also an interesting object of inquiry, and investigations on this point may be instituted in a variety of animals as well as man. Among animals may be enumerated, the sheep, deer, horse, hog, hare, falcon, bat, bream, herring, sepia lotigo, and frog. Sir Astley Cooper has also found a living worm in the cœliac artery of the ass, when

that artery was in a state of aneurismal dilatation. I will not here allude to the insects produced after the manner of the larvæ of the Œstrus, which are doubtless generated from ova deposited by the parent fly under the skin of deer, as stated in Franklin's account of his journey to the polar sea.

Naturalists have described several varieties of worms which are found in the viscera, or interstices of the muscles of the above mentioned animals. These are, the Ascaris, Tænia, Filaria, Strongylus, Ligula, Linguatula, and Fasciola.

I am not aware that such worms as those just alluded to, which are found living in the flesh or viscera of animals, have ever been observed to exist out of those animal bodies. We may except the Fasciola, which is found alive in fresh water, in the intestines of the bream and sepia lotigo, and in the liver of the sheep. The accounts we have of the Filaria Medinensis being found in India, "in the morning dew, often twelve feet long, and not thicker than a horse hair," is, I believe, not yet sufficiently corroborated. See Good's Study of Medicine, vol. iv. p. 652. Dr. Darwin believed that worms, similar to all the kinds discovered in the body, were to be found out of the body, but gives no examples. He says, he has "twice seen long worms like a thick horse hair, in water, in July, in England;" but he does not attempt to identify them with the Filaria Medinensis. The Gordius, or Seta Aquina, is found in stagnant water in the low grounds in Lapland; and Linnæus and Montin believed they traced this worm to be the cause of violent colics, to which the Laplanders are subject. I have not found the observations of others to verify their opinions. See mention of this by Dr. Good, who refers to Linn. Flor. Lapland. de Angelica, and to Montin. Amæn. Acad. Splanchnum, ii. 26.

Several circumstances concur to render it probable that the ova of the Filaria Equi are received into the stomach with the food; and these ova being taken up by the absorbent vessels, pass by means of the circulation to different parts of the body favourable to the development of the worm, which having taken place, their farther progress may be impeded by their increased size. This, however, requires farther elucidation.

The conclusion I have ventured to express, as to the formation and progress of those worms which are found in the flesh or viscera of living animals, does not arise from our having been yet able to trace the progress of any particular species of worm through its different stages of formation, and in various situations; but seems to be to a certain degree authorized by the combination of several circumstances stated in the above re-

marks: these are, the fact that the Fasciola is found in fresh water, in the intestines of the bream and sepia lotigo, and in the liver of the sheep. The Filaria Equi being found, according to Sir E. Home, in the circulating blood of the horse, and by Dr. Hardtman and Capt. Wyatt, in the cellular tissue behind the peritoneum. To these we may add the well-known fact of the Filaria found in the aqueous humour of the eye. The opinion that worms may make their way to different parts of the body, through the blood vessels, by means of the circulation, is farther corroborated by Sir Astley Cooper's observation of the worm found in the cœliac artery of the ass.

There is so little positively ascertained as to the natural history of worms which infest the bodies of living animals, that it still remains an interesting object of inquiry.

(To be continued.)

Extracts from Foreign Journals.

VESICAL AND BILIARY CALCULI.

(Continued from page 84.)

VESICAL CALCULUS IN THE HOG.

A BARROW pig which up to the 7th month had manifested perfect health, from that period fell away so much, although its appetite remained unimpaired, that two months afterwards the owner had it destroyed. He attributed this decline to a difficulty in passing its urine, which distressed the animal to such a degree that every time it wanted to stale it quite moaned with pain, rolling upon its back, arising and posturing itself (for staling), arching its spine and making violent efforts, too often ineffectual; at other times, and oftenest indeed, after much straining, a little urine was voided; but this was speedily followed by fresh efforts: occasionally, after having rolled about and lain upon its back, it obtained relief by a flow of urine in a full stream. The urine was at all times perfectly clear.

This account was sufficient to draw M. Reiss's attention to the presence of vesical calculus. He regretted he had not been

called in during the life of the animal that he might have made it the subject of operation, and requested permission to examine the carcass.

The bladder was half-full of limpid urine, in which floated the stone. The internal coat of the bladder about the inferior part exhibited slight blushes of inflammation; all round the neck it was deeply inflamed, and thence the reddening spread about an inch into the urethra: the peritoneum also exhibited a light tint.

SIMILAR CASE IN WHICH LITHOTOMY WAS PRACTISED SUCCESSFULLY.

In September, 1822, a pig, eight months old, was shown to M. Reiss, which ever since (4 months) it had been castrated had sensibly fallen away, notwithstanding its liveliness and appetite remained unaffected. It would continue for a long while in the attitude of staling without being able to make any water: but at other times the urine flowed involuntarily, or came away in fits and with force enough even to reach the fore foot. In walking it wriggled its croup.

Having placed the animal upon a table with the fore quarters sufficiently raised to throw the viscera backwards and consequently afford greater facility in getting at the bladder, I introduced the index and middle finger of my right hand into the rectum to ascertain the state of the latter. I found that it contained but little urine; and discovered through its coats a stone, round, hard, and moveable, which I pressed with much ease back to the neck of the bladder, but could not succeed in pushing it into the urethra, the part I proposed to lay open. I did so the next morning. I cut down upon a leaden sound previously passed into the urethra, and extracted the stone with a small pair of forceps.

For 14 days after the operation urine passed through the wound; on the 22nd day it was healed up. The animal speedily regained its embonpoint, and in two months after its recovery weighed five-and-twenty stone.

BILIARY CALCULUS IN THE OX.

In August, 1822, M. Reiss was called on to inspect the body

of an ox which had recently died in its stall, and to give his opinion as to its malady being of such a nature as to spread to the other oxen on the farm.

The deceased beast had manifested dulness since the beginning of August, and had insensibly fallen off in its condition and appetite; next, he was attacked all on a sudden with panting of the flanks—difficult respiration; and he ceased to ruminate: the excrement was hard. A few days afterwards he grew worse, lost all appetite and was constantly lying: the skin and extremities were warm; the mucous surfaces displayed a yellow dye; urine scanty. Latterly, diarrhea supervened upon a degree of constipation. The proprietor's treatment consisted in drinks and clysters of marsh mallow and linseed decoctions.

Examination. Tissues dyed yellow. Viscera in general reddened; more particularly the duodenum, cœcum, and liver; the last was of very large size, gorged with black blood, easily lacerable in its texture, softened; the gall-bladder was full of black inspissated bile in which swam a gall-stone the size of a walnut.—The spleen was also of large volume and in the same state as the liver.

M. Reiss concludes that death was the result of the general inflammation pervading the abdominal viscera; and that the gall-stone was an old affair.

REFLECTIONS.

The above cases may be viewed in more lights than one, but to me (says M. Reiss) the following conclusions in particular appear to be deducible from them:—

That stone may be present within the bladder without sensibly affecting the health of the animal.

That there is no symptom in particular by which we can be led to suspect that one or more stones are in a state of formation within the bladder.

That it is not until stones have acquired such a volume as to produce the symptoms detailed above that one can even suspect their existence; for, from all the information I have been able to collect, none of these subjects have been in the way of causes likely to produce nephritis, nor has one of them shown a single symptom of that disease.

In fine, whenever an animal stales with difficulty, in jets, a little at a time and often; whenever he paws, postures himself (for staling), lies down and frequently rolls; staggers in his walk; and the bladder is found, *per rectum,* distended with urine, the evacuation of which is followed by a cessation of the

colic; we may be almost certain that he has one or more stones in the bladder or canal of the urethra. Nothing further remains but to clear up these suspicions, and to operate, following the examples I have set forth or such as have been offered heretofore, according to circumstances.

ANALYSIS OF THE FLUID EFFUSED IN PLEURISY IN HORSES.

By M. J. L. Lassaigne.

1*st*. Colour, yellow; taste, saline; very viscous, froths when agitated and mixes readily with water.

2*dly*. It restores the blue to turmeric paper reddened by an acid. Nitric acid immediately precipitates large white flakes from it; infusion of galls throws down a copious, yellow, fleecy precipitate.

3*dly*. By heat it coagulates in yellow flakes and turns to a mass resembling the white of egg; silver immersed in this coagulable fluid while hot is withdrawn blackened: which is similar to what happens with white of egg, and is owing to the presence of sulphur.

4*thly*. The coagulated substance has a yellow colour, which alcohol deprives it of, and which, separated from the animal matter, is soluble both in water and spirit. The animal or albuminous substance, calcined in an earthen crucible, yields an ash from which is extractible a small quantity of phosphate of lime, as shown by its effervescence with weak nitric acid.

5*thly*. The uncoagulated part of this fluid, evaporated to dryness, yields a yellowish white alcaline extract, possessing a highly saline flavour. It contains a small portion of albumen, held in solution by the alkali present. The product of its calcination furnished, on being washed, sub-carbonate of soda, muriate of soda, a little sulphate of soda and muriate of potash: but no trace whatever of any soluble phosphate.

The conclusion deducible from these experiments is that this fluid bears the greatest analogy to the serum of the blood, both in regard to its physical properties and chemical composition; and that it consists principally of albumen and water, pervaded by a yellow colouring matter, and impregnated with all those salts detectable in the blood.

OBSERVATIONS ON HYDROCEPHALUS IN THE HORSE. (STAGGERS.)

By M. C. Lessona, *Professor and Director of the Royal Veterinary School, Turin. Translated from the Italian, with Annotations, by* J. B. C. Rodet, Junr. *Assistant Professor at the Royal Veterinary School, Alfort.*

HYDROCEPHALUS may be congenital or acquired: these observations regard the latter. In human medicine it is also distinguished into external and internal: the former being nothing more than œdema of the scalp.

The four cases related by M. Lessona consist purely in dropsy of the lateral ventricles; and as such in reference to the recent discovery of Magendie's, of an encephalo-spinal fluid, (which subsequent experiments on the living animal, particularly some by Dupuy, have since confirmed,) ought unquestionably to be viewed with some caution; and especially should it appear that the pretended dropsy was not very evident, and that it was confined to the lateral ventricles and spinal canal; but above all should the effused fluid itself not exhibit signs of its being the result of local irritation, either actually present or evidently pre-existent. In M. Lessona's cases however such was the nature of the fluid discovered in the ventricles, and such the morbid condition of the parts connected with the secretion, that no room is left for doubting that the disease was other than genuine hydrocephalus internus.

Case I. In January, 1826, a Hanoverian stallion, of a sanguo-lymphatic temperament, was discovered, without having evinced any previous disorder, thrusting his head against the manger, and stamping repeatedly and violently with his fore feet; the cranial region and ears were warm; the eyes fixed, the pupils dilated, and the conjunctive membranes injected; the pituatury membrane a little heightened in colour, the mouth hot, the tongue clammy and disposed to dryness; the pulse frequent and hard; the respiration difficult; the dung-balls small, hard, enveloped in an abundant yellow slime, and offensive to the smell; showing disorder of the digestive organs.—The animal was *largely* bled from the saphinar as well as the jugular *(sangles)* veins, and had clysters administered. When put into the longe afterwards, he bored against the caveson, threw his head up and commenced stamping again. Blood was taken from the neck again and also from the tail, after which he made a few turns in the longe and then fell down, lying for some time quiet; next, having arisen, he discharged some dung,

such as has been noticed, and a considerable quantity of turbid offensive urine, all which was followed by very perceptible relief.

"ANNOT. I. It would have been better to have specified the quantity of blood abstracted; because a bleeding which to one practitioner appears copious, to another may seem inconsiderable, or at least too small on such an occasion."

In the evening, being found boring his head again, he was bled afresh, had olive oil administered internally, and ice applied to his head, and received more injections; after which he passed a quiet night.

"II. The return of the symptoms showed that the cerebral congestion remained in full force; in such cases, ice ought not to be applied *near* to the affected organ, the seat of predominant irritation, until a marked remission has become established; otherwise, and experience proves it, so far from diminishing the afflux of blood and local congestion, the effect of the ice is to augment them, and so act contrary to our expectations."

The following evening the symptoms grew worse again. While leaning his neck upon the manger, the vein burst out bleeding afresh, and he lost a considerable quantity of blood. He fell down, dashed his head and feet violently about: at length he arose and experienced very marked relief from free evacuations both of urine and excrement, the latter sheathed in mucus and quite fetid. On the third day the animal with difficulty maintained the erect posture; pulse irregular; symptoms in general aggravated towards the evening; drowsiness, plainly showing irreparable lesion of the brain; the following night he died.

"III. This sort of intermittence in the symptoms, at the same time that it warns us of the seriousness of the case, is in fact one of the principal special characteristics of affections of the brain, both acute and chronic."

EXAMINATION—*of the Abdomen*. Considerable effusion of reddish serocity; peritoneum reddened; alimentary canal shewing traces of inflammation; mucous membrane of the stomach, duodenum and ileum, thick, rugose, ash-coloured, exhibiting some blackish spots, besmeared with bile and mucus, and slightly ulcerated towards the cœcum. Dark-coloured, dry, fetid excrement in the cœcum and colon: lining of the latter pale and ash-coloured. Liver greyish, interiorly a dirty yellow, pulpy; fluke worms within the biliary passages, which were in many places obstructed by concretions of black bile; kindneys inflated and soft.

Of the Thorax. Lungs gorged with blood; reddish serous effusion into the pericardiac cavity, but no perceptible inflammation.

" IV. The compression of the cerebral substance produced by the dropsy of the venticles, had then suspended the hematosis, in torpifying the action of the heart and lungs, and the animal died suffocated—in a state of asphyxia, as dissection plainly showed."

Of the Cranium. The lateral ventricles and other cavities of the brain distended with a limpid serous fluid. The plexus choroides pale, pervaded by a gelatinous substance, and spotted with small tubercles. Medullary matter pale and to appearance soaked through with serocity.

It would appear then, in the first place, that this horse, prior to the development of the *acute* cerebral and visceral irritation, was affected with a *chronic* inflammation of the liver and *morbid irritation* of the arachnoid and brain, which was attended with serous effusion into the ventricles; and, in the second place, that the acute irritation ulteriorly manifested in the brain, did not run on to inflammation, but was confined to the production of a morbid excitation, and to the determination of an augmented exhalation of serocity into the ventricles; a deduction appearing still more plausible when one lays due stress upon the remission of the symptoms.

" V. We have already said (in Annot. III. p. 124.) that these remissions are as common in acute as in chronic cerebral affections: therefore we have no right to draw any inference of the real character of the disease from this, nor, for the same reason, come to any conclusion from such a circumstance alone, whether it exists in that form or not."

The animal, the year before, had suffered severely from inflammation of one of the hind fetlocks, from injury, from which arose spasms and febrile re-action, the inflammation ending in ulceration and anchylosis. At the same time, the opposite limb took on chronic inflammations of the hip-joint and foot from the additional burden thrown upon it. These inflammatory and painful disorders, relapsing for several months, transmitted to the nervous centre, gave rise within the brain and its membranes to an anormal and inordinate excitation, which was followed by more or less serous exhalation, principally into the lateral ventricles; at the same time, it created morbid irritation in the digestive apparatus, which proved the cause of the chronic inflammation pervading the alimentary canal. For some time the horse had been dull, manifesting a sort of stupor, and was little disposed to move about.

The exacerbation of the malady, and its transition from its primitive state of sluggishness into the acute form of cerebral irritation, which was so promptly succeeded by the fatal effusion, may be ascribed to the morbid influence of the season and the co-existence of lesions within the alimentary canal. The presence of the fluke worms was remarkable: they probably owed

their development to the continuance of the *antiphlogistic* regimen; since it is well known that herbivorous animals fed on provender deprived of its exciting properties, innutritious and washy, are the ordinary subjects of verminous disorders.

"VI. What we can lay down with still greater assurance, from the unexceptionable evidence furnished by experience, is that all worms, and consequently biliary as well as intestinal, are generated only under certain morbid conditions; and that these conditions, wel lknown at the present day, consist in the existence of chronic irritation in the parts which breed the worms. So that any provender of a kind to dispose to such states, be it excitant or indigestible from other causes, may turn out to be accidentally the producer of such affections; but an *antiphlogistic* regimen, simply from its debilitating influence, can have no such effect. On the contrary, this regimen would be desirable providing it were in truth calculated to combat efficaciously those irritations favouring the production of the worms, since it would prevent their formation, which is to be regarded as the effect and not the cause."

(To be continued.)

Communications and Cases.

VETERINARY EDUCATION.

To the Editor of the Veterinarian.

SIR;

IF you deem a couple of letters, addressed to a Young Veterinary Student, worthy a place in your valuable Journal, you will oblige me by inserting them.

I am, &c.

PHILO-VET.

March 3, 1828.

MY DEAR YOUNG FRIEND;

I MOST willingly comply with your request, and will trace the outline of that course of study, which, in my humble opinion, you will with most advantage pursue during your attendance at the Veterinary College.

My first advice, or, rather, my earnest entreaty, will be "*Aim high enough.*" It is true that, not many years ago, the name of Veterinary Surgeon was unknown. We were all Farriers and

Cowleeches, mingling with, and belonging to, the lowest class of society. If we are now permitted to assume the title of Veterinary Surgeon, that higher designation, while it confers on us many privileges, imposes corresponding duties. If we are no longer the groom's companion, the coachman's friend, and the oracle of the ale-houses;—if we call ourselves, and are acknowledged to be, members (inferior ones undoubtedly) of the medical profession; it is taken for granted that we possess the acquirements and manners suited to our new station. If we have them not, and if we do not seek to obtain them, we shall expose ourselves to deserved contempt, and bring disgrace on the profession to which we belong. Therefore, "*Aim high enough.*"

The education of a farrier, or the acquirements of the Veterinary Surgeon for too many years past, will no longer satisfy the just expectation of the public, or establish your own reputation and success.

My next advice, and most strongly urged would be—*Cultivate a deep interest in the weal and woe of your patients.*

What is the avowed, I trust, the true and important object of your profession? It is to increase enjoyment and diminish pain.

Although your patients have not the intelligence of the noblest of the works of God, they often display much sagacity; they are attached to you; faithful, useful. It is disgraceful in any individual to injure or torture them, and much more so in the man who has pledged himself, by the profession which he follows, to be their protector and friend.

You will have it in your power, and it will be your duty, to correct many absurd and cruel practices, whether by the groom or the master; and, if you would succeed in your laudable attempt, you must not sin yourself.

Your patients will not be able to tell you either the seat of their ailments, or the degree of their pain; and you must form your opinion of many of their diseases by a very careful observance of their appearance and habits. If you approach them in a brutal way, and the oath and the blow, should they offend you, go together, you agitate and frighten them, and you cannot possibly judge of their actual state, or from a rational decision as to the remedial measures you should pursue. Approach a horse gently and coaxingly, and you have the true state of his pulse and his respiration. Go up to him, as too many farriers and some Veterinary Surgeons do, and you increase the heaving of his flanks, and most strangely quicken the beatings of the heart.

If you would be regarded as a skilful, and esteemed as a humane practitioner, and would have an internal and powerful motive to be indefatigable in the discharge of your professional duty, cultivate a spirit of humanity. The professional butcher is universally and deservedly execrated.

You ask me what period of time you *must* allot to your attendance on the instructions and practice of the College. I apprehend it was designed, at the institution of that Seminary, that the education of the Veterinary Pupil should occupy two years. In the French Colleges four years are devoted to this purpose.

The *res angusta domi* of many students will not permit them to remain thus long; but the true interests of the pupil, and the respectability of the profession demand that the period of two years should not be very much curtailed. There is no royal road to learning. The age of miracles has long gone by, and I hold it to be impossible for any young man, in six or eight months, to acquire the habits and the knowledge requisite to make him a competent Veterinarian.

You tell me that you will probably be able to remain 15 or 18 months. I could have wished that the period might be extended. These months, however, must be diligently and honestly employed. You have not one moment to lose.

At once commence the close and anxious study of Anatomy. On this foundation, and on this alone, must your medical acquirements and future respectability be reared. How will you repair the machine unless you perfectly understand its construction? There is scarcely a disease—there is certainly no operation—in which accurate anatomical knowledge will not only be useful but absolutely necessary.

Be not content with a careless survey of the animal frame. Diligently, laboriously study *minute* Anatomy.

It is true that a portion of this will soon be forgotten; but that which is most important to your fame and your success will remain. Enlarged and correct conceptions of the structure of the frame, and the function of the various organs, will be indelibly engraven on the tablet of the memory. Some parts of the picture may wear away, but the grand outline will never be effaced. The steps by which we ascended the eminence of science may not be remembered, but the extensive boundless prospect will continue to greet our view.

You have two excellent books to guide your studies, Blaine and Percivall. I will not discuss their comparative merits. You may safely follow them both, and neither can be spared.

Begin with the Skeleton. If you cannot obtain access to

that at the College, the large plates published originally in Blaine's Folio Anatomy, and similar ones by Kirtland, may easily be procured. Make yourself well acquainted with the names of the different bones, their precise form, their relative situation and connexion. This is the first and not very difficult task, and advance not a single step until you have perfectly mastered it.

Then take one of the extremities, and study its muscles and the manner in which its different parts are connected together. Begin at the upper end, and carefully work your way downward.

As you proceed endeavour to obtain not only a correct idea of the form and connexion of each part, and the origin and insertion of every muscle, but of their proper function and use. Let your physiology, even from the beginning, and so far as observation and diligence will accomplish it, keep pace with your anatomy.

While you are thus engaged on the skeleton, or the extremities, devote a portion of every day to the perusal of some elementary treatise on Physiology, that you may acquire some conception, afterwards to be enlarged and perfected, of the fundamental principles of life. I do not know a better treatise on Physiology than that of Richerand as translated by Copland, and rendered more valuable by his copious notes. It is not, perhaps, a very profound book, but it is well adapted for the perusal of the young student.

Read the first 75 pages, until you arrive at the functions of the different organs. There stop. You will injure yourself by poring over that which you do not understand, and you cannot understand the function of an organ, until you are perfectly acquainted with its anatomy.

When you have arrived at the 75th page of Richerand begin some popular treatise on Natural Philosophy. Mr. Marcet's Conversations or Millington's Epitome are the best. This will admirably prepare you for the consideration of the functions of the more important organs.

Believe me, my young friend, that they counsel you wrongly who would persuade you that a knowledge of Natural Philosophy will do the Veterinarian no good. Among those by whom you will probably be employed, and particularly among the wealthy agriculturists, you will find many inquiring minds. Your natural and best associate and friend, the medical man of the town or village in which you may be settled, will not expect to find you less informed than his youngest apprentice, or his

boy at school. Depend upon it, that if you keep not pace with the march of improvement you will be slighted and despised.

What station are you to fill in life? When every school-boy, and almost every mechanic can now explain many of the phenomena of nature, are you still to be consigned to the degrading ignorance of the common farrier? While you mingle with the middle, and even to some extent with the superior ranks of society, are you to be painfully depressed by the consciousness of your comparative ignorance?

How will you understand, or your teachers explain the functions of many parts without a reference to, and previous acquaintance, with the rudiments of Natural Philosophy? The elucidation of the beautiful structure of the Eye,—the complicated mechanism of the Ear,—the processes of respiration and circulation, will be most imperfectly comprehended by you, or absolutely unintelligible.

Let part of your evening be devoted to a review of the progress you have made, or the knowledge you have acquired, during the day. If you have any plates (we have very few, and not very good ones) trace on them the muscles and parts you have dissected. Read about them. Talk of them with your companions. Your Physiology so far as you are now permitted to go—your Natural Phylosophy; think whether you understand them. Begin to apply them as far as you can. Take the beautiful and most useful application of the principle of the lever to the construction of the limbs. The few contrivances, yet some of them very striking, to lessen the expenditure of muscular power; and, generally speaking, the lavish expenditure of power to preserve beauty of form, and quickness and perfection of action.

Are these things to employ every evening? They are to employ as many evenings as you have resolution to give to them. These few months are most important to you. Neglect now can never be compensated.

By following this apparently strict counsel, you may sacrifice some pleasure, falsely so called, but you will enjoy the greater pleasure of conscious improvement and well-earned esteem.

Having conquered the skeleton and the extremities, proceed to the organs which are connected with the important functions of life. Thrice in the week you will attend on the Lectures of the Professor. The different organs and their functions will be demonstrated and explained by him. Take them in the order in which they occur in his Lectures. While his descriptions and illustrations are fresh on your memory carefully dissect the part.

One dissection at that time will be worth 50 mangled subjects. The country over which you will then travel will be familiar to you. You will recognize the different objects as they present themselves. You will comprehend all their connexions and uses: and the impression which will then be made on your mind will not afterwards be obliterated.

You will have no excuse for the neglect of this. Your subjects are easily procured—they are not offensive or dangerous, and they will not cost you much. Every impediment to the knowledge of minute anatomy is thrown in the way of the student of human medicine, by the existing state of our laws, and by general prejudice; but no apology can be made, if you neglect that without the knowledge of which you will be a mere pretender.

Make yourself thoroughly master of each organ as you go on. Compare the account of each, given by your Lecturer, with what careful dissection discovers; and his conclusion with your own. Consult Richerand on each. Take him for all in all, I cannot recommend to you a better book. Read Percivall and Blaine. The study of these works, without dissection, will be comparatively unsatisfactory and unimproving; but, after the diligent use of the scalpel, you will be prepared to make all that is valuable in them your own.

In the evening, after reviewing the work of the day, and continuing your physiological and philosophical reading, take some book on Comparative Anatomy. Coulson's Edition of Lawrence's Translation of Blumenbach is an excellent work. I must here beg leave to enter my humble but decided protest against the assertion of your expected Professor, that Comparative Anatomy will mislead the Veterinary Student, and is worse than useless to him. No one knows better how to use, and very properly, acquirements drawn from Comparative Anatomy in defence of his own favourite theories.

A consideration of the different structure of the same organ, according to the situation and wants of the animal,—the difference of function depending on this difference of structure—and the difference in the nature, and connexion, and treatment, and termination of disease resulting from variety of structure and function must be very interesting, and highly advantageous.

The muscular stomach and short intestines of the dog; the curiously constructed stomach and enormous length of bowel in the horse; the four stomachs, and yet the long and capacious intestines of the ruminants, will afford much matter for useful reflexion. These will be your patients. Comparative Anatomy, thus far, must be studied by you, if you are faithful to yourself

and your future practice: and I should advise you to carry your researches as much beyond this as your leisure and opportunity will permit. At all events you will observe and admire the various means by which the Great Architect accomplishes the same object, and all of them wisest and best.

Chemistry will now require your attention, to prepare you for the means with which you are to combat disease. It is absolutely necessary that you should be acquainted with the nature of drugs—the different affinities of substances—the changes produced by combination—the degree to which you may probably neutralize some valuable property, or even excite deleterious agency—the methods by which you may ascertain the genuineness of your drugs, and be guarded against imposition where it is too generally and abominably practised.

Certainly, if your Pharmacopœia is to consist of only four or five drugs, and "you may carry the whole of them in your pocket," chemistry cannot be very useful to you in your pharmaceutical operations. This however is a most erroneous, absurd, disgraceful, unjustifiable, dangerous doctrine, and bitterly would you rue the day in which you adopted it as your creed.

In consideration of its connexion with agriculture, with the arts, with commerce, with the phenomena of nature, and with the general business of life, a total ignorance of chemistry would be a sad reproach. The mere mechanic would even discover your deficiency, and heartily despise you. I do not wish you to enter into all the intricacies of chemical research, but I would urge you to cultivate a knowledge of its good and fundamental principles.

Having become acquainted with the structure and function of the different parts, you will be qualified to enter on the consideration of their diseases. It is a frequent and pernicious error of young students, to form their notions of disease, and to speak peremptorily of its nature and treatment, before they know any thing of its cause, its seat, its connection and effects.

When you have completed the Anatomy and Physiology of any part, and not before, avail yourself of every opportunity to study its ailments. Without this preparation you are exposed to a thousand misconceptions, and may adopt many a wild and mischievous theory which will mislead and injure you through life.

As each case presents itself inquire Is it a disease of structure or of function? of what function? what others may sympathise? how far may it have produced or been the consequence of a change of structure? does it proceed from excess or defect of stimulus? &c. &c.

You can never acquire correct and enlarged conceptions of the proper indications of cure, until you are perfectly acquainted with the nature of disease. This, however, is not the opinion or practice of many students. They travel to the College to obtain a deploma, and to learn what they are to give in certain diseases. This species of knowledge is mere empiricism; and the exhibition of the same drug under all the varieties and changes of disease will lead to dangerous and ruinous consequences.

Let me entreat you diligently to inquire into the nature, seat, and connexion of every disease. Consider what you are to *do*, not what you are to *give*. What object you are to accomplish. The purpose and object once settled, the means will not be difficult to determine.

Provide yourself with a *Case-book*. Accompany your Professors in every clinical round. If you are not perfectly acquainted with the nature and seat of the disease, apply to them for information. Do not pass by a single case (so far as your anatomical and physiological researches have been carried) until you thoroughly comprehend it.

I do not advise you to tease your Professors with foolish and impertinent questions, but you have a right to ask information from them, and it will give them great pleasure to instruct you.

Make every case, for which your studies have prepared you, your own; write down the symptoms; the conclusions which you draw from them as to the nature of the disease; the means adopted; the purpose intended to be accomplished; the effect produced; whether change of symptoms has caused alteration of treatment; how far new affections have become connected with the original one.

The study of a dozen cases, thus followed up, will do you more good than the perusal of a thousand volumes; or an attendance on the most enlarged practice, without note or comment. Some point of Physiology or Pathology will be daily illustrated. Some rule of practise exemplified, and there will scarcely be a disease that will not bring to your recollection important principles and precepts, and impress them more deeply on your mind.

I fear that I have wearied you by this long epistle; but I have yet to speak of the Lectures of the College, and your associations there, and some other not unimportant particulars. They shall be the subject of another letter shortly.

Yours, &c.

PHILO-VET.

QUALIFICATIONS FOR A VETERINARY SURGEON.

To the Editor of the Veterinarian.

SIR;

I BEG to offer you a few observations respecting medical men becoming veterinary surgeons. Professor Coleman's opinions on this subject, I believe, are so well known, and so often promulgated, that I am not a little surprised they have not, long ere this, been remarked upon by some one of the profession more competent than myself: sooner however than they should remain dormant, mislead the public, and above all throw such a stigma on those who are in the profession as medical men and veterinarians, I am induced to take up my pen, to endeavour to convince the world that this dogma is held forth from very different motives than those stated, and necessarily forms a bar to the advancement of this more than neglected profession. Without further comment I cannot do better than quote the Professor's opinions from his introductory lecture, and which I shall then advert to, seriatim.

"I find from long experience," says he, "that different individuals who come to this College succeed afterwards in practice, according to the kind of knowledge they stand in need of; and here I feel it my duty to state (what I have been much censured for, nevertheless I repeat it, because I feel it to be true) that *the sons of farriers make the best practitioners; medical men the worst.* The former come here acquainted with a spavin, or splint, or windgall, as it appears in the living horse, but ignorant of its nature; the latter is perfectly acquainted with the rationale of these maladies, but is unable to detect their existence: the one knows how to bleed and rowel a horse, and give him a ball; the other is unwilling to dirty his fingers to obtain the practical knowledge. The medical man must acquire all that the other knows before he can be considered qualified to practice, whereas the farrier's son need not learn all that the other knows; *such learning is not called for in the veterinary practitioner:* besides, the farrier's son will perform his task with the greatest cheerfulness and pleasure, but the medical man will regard the part he has to take as dirty drudgery. Stating all this is probably contrary to my own interests; but it is my duty to state it, because I feel it to be the truth. Another reason why medical men either do not

succeed or quit the profession, is perhaps because they do not find it equally lucrative."

Now, Sir, I would ask you how it is possible for a profession to advance in the estimation of the public, when such sentiments are held forth by the person who is looked up to as its head: it is a bar to all advancement, and to all industry; for the farrier's son, on hearing such sentiments, naturally says, "I require only a certain quantum of knowledge, and I amperfection." The medical man, let his knowledge be what it will, is constantly looked upon with an eye of prejudice; and should his ultimate object be a veterinary appointment, his hopes must necessarily be annihilated. As far as the competency of a medical man goes to make a veterinary surgeon, I would ask every man of common sense, who can be so fit? As reasoning from analogy (which the Professor will not allow, though all the time he himself is constantly doing so) he is already half way in his business. There is no general rule without an exception, and I have no doubt there are many medical men who never would make good veterinary surgeons; but this does not apply to all: in town and its vicinity perhaps it may, because it is not requisite; but go into the country, and where will you find better horse-men, or men who keep better horses than the medical man does: they are compelled to be so, from the many miles they are in the daily habit of riding. Will the Professor pretend to tell any man at all capable of reasoning, that such a man is not more competent, with the least attention, of becoming a veterinary surgeon than the ignorant groom or village blacksmith: the former has to learn a little practical information that the latter knows by practice only, and which can be easily learnt in a short period by common attention; but can the latter learn Anatomy, Physiology, and Pathology in a short period? No; he cannot: it would take him years; and which, if we are to know our profession, is as absolutely requisite in one case as the other, though Mr. Coleman may not consider it necessary for his pupils. The summit of the farrier's son's education, which is reading and writing, will never allow him to reach beyond a certain point; he has the liberty of attending certain lectures in town, it is true, but he has not the time to do so, unless he neglects more important concerns; and if he had, he has not the ability to understand them. He goes then to the College for a few months; has his head filled with a few theories of the foot, and a parcel of hard words he is incapable of understanding; and is then sent home as a monstrous clever fellow. Yet this sort of person is to be set in competition with a man of science and

education, capable of reasoning upon every step he takes. Our best veterinary authors and practitioners are members of the Royal College of Surgeons: among whom I may mention Morecroft, Coleman, Goodwin Senior, Goodwin Junior, Percivall. If then they are bad practitioners, we of course cannot withdraw the name of the Professor.

When Mr. Coleman was first elected to take the chair as Professor at that College, was it from his veterinary knowledge he had that honour conferred upon him; I suspect not; I should rather say it was from his ability as a medical man. What would he then have thought, had such observations been applied to himself, had he been considered ineligible, because he was a member of the Royal College of Surgeons? consequently his knowledge of horses very dubious: he would have considered it an *insult* to his understanding, as medical men in the profession do now as applied to them. As a horse-man, if by such is meant keeping a good stud, or being able to ride well up to hounds, those who have had the honour of knowing the Professor longer than myself can best answer for his reputation; but I never remember having heard of such a circumstance.

If then medical men make such bad veterinary surgeons, it seems to me an absurdity, and at direct variance with the Professor's opinions, that the first medical men in town should be chosen veterinary examiners, who never can have attended to the subject, and therefore what knowledge they have must be perfectly theoretical; yet they do not scruple to ask practical questions. I am not a little astonished then, that out of so many hundreds of veterinary surgeons who are not medical men, half a dozen cannot be found sufficiently competent to grant diplomas, without having recourse to gentlemen who must on all hands, even by the Professor himself, be considered unqualified for the duty. This fact will alone, I think, speak volumes.

Allowing that medical men do not make good veterinary surgeons, do all those, or half that are raised up under Mr. Coleman's immediate tuition, prove to be so? We will, *exempli gratiâ*, take one who ought to be pre-eminently qualified—*one* who has resided within the walls of the College for years, with dissections and practice constantly before him. This requires no further comment of mine; the veterinary profession have long been convinced of the contrary—that a person receiving so large a salary is perfectly incapable of fulfilling the duties of his situation—even of the demonstrations.

"Ut sanus sanam prolem, sic morbosus morbosam gignit."

The Professor observes, it is against his own interest to make such statements concerning medical veterinary surgeons: in this I am sorry I cannot coincide with him. It cannot be doubted but that the emoluments arising from the lecture-room are very great, when we consider the number of pupils annually entering at 20 guineas each; so that if the pupils were limited to those only of education, it would be a matter of no small importance. We cannot therefore be surprised that every inducement should be held forth for persons of all classes to enter the profession, whatever may have been their previous occupations or present attainments. But what most we complain of is, that however illiterate the party, a favourable prepossession exists, to the injury, I had almost said ridicule, of the medico-veterinarian. If then the lecture room is filled, it is of little consequence by whom, or what their ability to uphold the future respectability of the profession; and yet it is not self-interest to make these statements,—then pray what is it? The medical man, the young man of education, is capable of judging for himself, and will not be biassed by every varying opinion of his preceptor. These, however, are not the pupils the Professor wishes for; he must have those who will not only fill his lecture-room, but cannot see into or interfere with his monopoly. It certainly would not be politic to hold forth the contrary of these statements in the present degraded state of the profession; since he would, I fear, get few medical men or men of education to attend his lectures. It is true, indeed, the few medical men who have entered the profession have, with some exceptions, quitted it with disgust, and for the best of reasons; not because, as is stated, they are not horse-men, or not competent of fulfilling their duties, but because there has been little prospect of their rising with their profession into respectability, and because sentiments were held out to the public and pupils to their prejudice and interest. Not again, as I have heard it repeatedly stated, because he is fearful of soiling his fingers; for those who assert that must be very ignorant of human dissection and human practice.

It is quite time the curtain was withdrawn; and that every man took his station according to his ability: it is this, and this only, which can place the veterinary upon a footing with the medical profession; but so long as ignorance and vulgarity are allowed to take precedence of talent and gentlemanly conduct, so long will it continue in its degraded situation. The superior part of the profession have long felt how society look upon them as a body, not judging of individual merit or demeanour; but there are still left, I hope, a few men of education, who will coalesce to convince the public of the mis-statement, and prove

to them that the medical man, the veterinary surgeon, and the gentleman, can be combined.

I beg to remain, Sir, yours, &c.

VERITAS.

THE STETHOSCOPE.

To the Editor of the Veterinarian.

SIR;

IN the course of your extended practice, have you made use of the stethoscope in diseases of the chest?

Our patients cannot tell us what they feel; nor does the pulse, nor the heaving of the flanks, nor the injection of the schneiderian membrane, nor the heat of the breath, nor the coldness of the extremities, at all times indicate with sufficient accuracy the degree of inflammation, or the period when congestion begins to take place.

It is of the utmost importance to the formation of a just prognosis, and the safety of the animal, that we should know whether there be inflammation of the mucous membrane of the lungs, and to what degree it exists; whether the air-cells are becoming impervious, or a deposition of fluid is commencing between the pleuræ.

The stethoscope applied to the thorax of the horse will give the murmur of the healthy lung during each act of inspiration and expiration. I am persuaded that I have, more than once, heard this noise becoming more sonorous with the increased action of respiration, and again returning to the natural murmur when this inflammation had subsided, and absolutely cease when congestion had begun; and cease in some spots, and strengthen in others, when congestion has partially taken place and the labour of other portions of the lung was increased to supply the deficiency; and likewise cease, but an obscure undulatory pulsation remaining, when effusion has commenced.

I have likewise fancied, that I have obtained a clearer conception of the nature of broken and thick wind.

I would rather however, at present, appeal to those who may have made more extensive use of this instrument than I have done; and would request my brother veterinarians to try its power. I do not think that they would be disappointed.

Should no other person take up the subject, it shall be resumed hereafter by

V. S.

ON RABIES CANINA. *By* W. YOUATT.

(Continued from p. 64.)

I HAVE described the symptoms and post-mortem appearances of rabies in the dog. They must now be considered in other domestic animals.

However my readers may hereafter differ from me, as to the occasional cause of rabies in the dog, there will be no dispute that it is produced in the horse by inoculation alone.

Its attack in that animal is most sudden. He will go out apparently well; all at once he will stop, tremble, heave, paw, stagger, and fall. Almost immediately he will rise, draw his load a little farther, again stop, look about him, back, stagger, and fall.

This can scarcely be confounded with megrims, for the horse is not for a single moment insensible; and, after seemingly recovering, possibly falls twice or thrice before he can be led home. The sooner he is led home the better; for the progress of the disease is as rapid as the first attack is sudden.

In many cases, perhaps the majority of them, a state of the highest excitation speedily ensues; the horse kicks and plunges in the most violent manner, he is then quiet for a while, recognizes his attendant, is sensible to his caresses, and looks most piteously at him. A rabid horse belonging to Mr. Keat pressed his head repeatedly against me; then, without the slightest notice, he plunged and fell.

Sometimes he is mischievously disposed; he will furiously seize and bite other horses, and even his attendants; and, as Mr. Blaine well describes it, "will level with the ground every thing before him, himself sweating, and snorting, and foaming amidst the ruins."

Staggering and palsy of the hinder extremities soon succeed. I once saw a mare sitting on her haunches, and unable to rise, yet pawing furiously with her fore feet. The disease, however, quickly runs its course, and rarely extends beyond the third day. In two cases I fancied I saw something very much resembling hydrophobia. The thirst was excessive, but the act of swallowing was performed with a forced gulping effort, and suddenly

the head was snatched from the pail with a strange contraction, a kind of risus sardonicus of the lips.

In Mr. Keat's horse there was a peculiarity which I have in no other case seen, and which no author has described. The owner would not have him destroyed, and we slung him in an early stage of the disease. He had been bitten in the near leg, behind. When I approached him on that side the poor animal was agitated, and trembled, and struggled as well as he could, and if I touched him with only my finger, the pulsations were quickened more than 10 beats a minute. When I went round to the off-side, he permitted me to pat him, and even sought my notice.

In every case in which I have had opportunity to examine the animal after death, I have found inflammation on the epiglottis, and generally in the trachea. There has uniformly been inflammation in the stomach, and on the lungs, and in patches, as in the dog. Either the membranes or substance of the medulla oblongata have always been injected.

I have seen but one rabid ox. His disease commenced with loss of appetite and dulness; but it soon changed to the most dreadful state of excitation. When I saw him he was standing across a path in a meadow, bellowing incessantly, and tearing up the ground with his horns. I believe, however, that much ferocity does not usually accompany rabies in the ox. The eyes are anxious, protruding, and red. The appetite lost. A considerable discharge of saliva in the early stage of the disease, and when that ceases, insatiable thirst follows. No hydrophobia. A frequent and pitiful lowing. A distressing tenesmus. Weakness of the loins and early staggering, succeeded on the third or fourth day by palsy of the hinder extremities. The animal lingers on six or seven days, and usually dies without a struggle.

The post-mortem appearances in the pharynx very much resemble those in the horse. Both the membranes and substance of the medulla oblongata were injected in the case which I saw; but the stomachs were perfectly free from inflammation. I inoculated a dog with the saliva of this ox and he died rabid.

In sheep the character and progress of the disease are not very different. The thirst is as great. No hydrophobia. The same constant tenesmus, weakness of the loins, and subsequent palsy. There is never in the ox, and rarely in the sheep, any disposition to bite; but sheep are very irritable, and make frequent and effectual use of their horns. In the male of both there is in the early stage an excessive desire of venery.

Death ensues about the fifth day. The appearances on dissection resemble those in the ox.

In swine the character of the disease is as uncertain as it is in the dog. Some are exceedingly ferocious, runing at every person, gnawing and shaking their troughs, dashing themselves against the wall, or endeavouring to spring over it. Others content themselves with harmless and ludicrous antics. They snuff the air and gallop round and round, uttering a strange and shrill squeak. Generally however they are quiet; they refuse their food, are eager for water, stagger when they attempt to rise, become paralytic, and die about the fourth or fifth day. No hydrophobia.

In the ox, sheep, and swine there is occasionally not so marked, but sufficiently evident, the peculiar delirium by which rabies is characterized in the dog.

After death there is usually inflammation about the glottis; uniformly considerable inflammation of the stomach, and but little or scarcely distinguishable of the membranes of the medulla oblongata.

I have never seen a rabid cat, but I understand that it is a most dangerous animal. It will not attack the human being or the quadruped without provocation; but it is exceedingly irritable, and, at the slightest offence, will seize the hand, or dart at the throat, and use both nails and teeth with dreadful effect.

To make our subject complete I will briefly state the usual symptoms in the human being.

Pain in the bitten part is an early symptom in very many cases. To this succeed lassitude, fever, anxiety, irritability, horror at the sight of water, and the attempt to drink it accompanied by dreadful spasms. A strong inspiration, without the sight, or even thought of fluids, will generally produce the same spasm.

The irritability increases and becomes excessive. The poor sufferer cannot bear the least motion around him, or the slightest wind to blow upon him. There is an inordinate and irregular and perverted action of the voluntary muscles. Every motion is performed with a hurried start, and uncertainty of effect. The eyes roll unconsciously in search of some imaginary object. A delirium comes on different from that which accompanies any other disease. The patient fancies that he is surrounded by persons far distant from him. He converses with them of things long gone by; or he abuses them with the most violent gesticulation; but in a moment, with a word, he is recalled to himseif. The next minute he wanders again. He occa-

sionally vomits bilious matter. He is oppressed by viscid saliva which adheres to the fauces, and which, with the most violent efforts, he strives to throw from him.

Subsequently all the symptoms relax. He is able to swallow, but the powers of the constitution have been destroyed, and death ensues.

Of the appearances on dissection I am unable to speak. Some surgeons maintain that not the slightest trace of disease can be found in the thoracic or abdominal viscera, and only the usual characteristics of phrenitis in the cerebrum. Others give an account of injection of the membrane covering the glottis, and redness of the mucous coat of the stomach, with spots of ecchymosis; and inflammation of the membranes of the medulla oblongata, or portions or the whole of the spinal cord. I must not presume to decide who is right, or whether all are so; but I acknowledge, that when the same medical men who find no morbid appearance in the human being, find none likewise in the brute, I do wonder with great amazement.

The symptoms of rabies are very similar in man, and in all our domesticated quadrupeds. In all there is the same affection of the respiratory nerves; the same howling, or at least choaking noise; the same excessive excitability, and incessant and uncertain action; the same singular delirium, affection of the stomach, and discharge of saliva; the same inevitably fatal termination of the disease; and, I am disposed to believe, nearly the same morbid appearances after death.

The human being however has a dread of water, which the quadruped has not. It is true that the dog is unable to swallow, but he flies eagerly to the water; and all other quadrupeds, with perhaps an occasional exception in the horse, drink with ease and with increased avidity.

How is this? Are they different diseases? Is hydrophobia in the human being the creature of imagination?

A dog labouring under a disease attended with certain symptoms bites a man, or a child in whom the power of imagination has not yet been awakened. In process of time he is attacked by a malady, accompanied by characters very similar, but to which another peculiar symptom is superadded. The dog died. The man or the child likewise died in despite of all medical care and skill.

Are we to expect that the same symptoms shall accompany the same disorder in every animal? Are the characters always the same in the same animal?

Difference in structure produces variations of disease, quite

as remarkable as that which we are now considering. The inflammatory fever of cattle and sheep often runs its course in two or three hours. The hoven of cattle is unlike tympanites in any other animal. The stomach-staggers of the horse bear little resemblance to repletion or over distention of the stomach in other patients. Psora or mange in the horse, the dog, and the sheep are very unlike. Affections of the chest, and their symptoms, duration, and termination are dissimilar in the biped and the quadruped, and in different quadrupeds.

Not only do the symptoms of disease vary, but some animals are subject to certain maladies from which others are exempt. The horse has glanders, farcy, grease, and periodical opthalmia. The mule has rarely, and the ass never has, strangles; and both of them escape the torture of contracted feet. Cattle, sheep, dogs, swine, know not any of these complaints.

The human being has, peculiar to himself, variola, scarlatina, and syphilis.

Need we then wonder that there should be considerable dissimilarity in rabies?

Possibly a little reflection will lead us to expect some difference, and precisely of the kind which we observe.

Hydrophobia, the dread of water, and the horrible spasms which accompany the attempt to swallow any fluid, depend on the highly irritable state of the fauces and larynx.

The larynx is the guard of the trachea during the act of deglutition. The epiglottis is then pressed down upon the orifice of the larynx, and the crico-arytenoïdei muscles contract and accurately close the aperture.

The larynx likewise discharges a more important function. It is the principal organ of voice. According to the number of vibrations performed by the chordæ vocales in the act of expiration, is the precise tone uttered. A certain number of vibrations will produce a certain note. If the vibrations are quickened, the note assumes a higher place on the musical scale. If the number is lessened, the tone is proportionably graver or lower. The human voice is capable of nearly 500 different intonations, and each is produced by a determinate number of vibrations; and these vibrations, their number continuing the same, are modified, partly by the mechanism of the fauces and mouth, but more by the larynx, to express every varying emotion and passion. The larynx then must be possessed of exquisite sensibility to obey so rapidly, and with such strict and almost inconceivable accuracy, the mandates of the will.

The voice of quadrupeds is more confined. There are fewer differences of intonation, and the expression of passion is more

simple. This exquisite sensibility will not be needed in them. It is a law of nature, that where extraordinary function is required, extraordinary sensibility and power are bestowed; but if the function is simple, and the work easily accomplished, less feeling and less energy are supplied. This is benevolent and wise. Quadrupeds have also a mechanism peculiar to each, and in a great measure independent of the glottis. The horse has a falciform membrane, attached by its middle to the thyroid cartilage, and its extremities extending to the margin of the rima glottidis. The ass has a similar apparatus, with an excavation under the thyroid cartilage, and two membranous sacs. The cat has a delicate membrane under the ligament of the glottis. The swine has membranous bags of a considerable size; and the ventriculi laryngis of the dog are very large.

With this additional mechanism for the production of the voice, the extreme sensibility of the human larynx is not required; and nature bestows not that which the necessity of the animal does not demand.

Considerable affection, however, of these parts attends every case of rabies in the dog. The involuntary and peculiar howl, the choaking noise attendant on each respiration, and the blush of inflammation, more or less intense, which every dissection presents, sufficiently evince it.

If we do not observe the dreadful spasms by which the human being is tortured, let it be remembered that they are not excited by the passage of solid food. Fluids alone have this power, from their being brought into more intimate contact with the inflamed and irritable surface.

It can easily be imagined, that the decreased sensibility which more limited and simple function requires, would render those membranes, which are indifferent to the passage of solids, unaffected by fluids, &c.

The mystery, therefore, is in some degree unravelled; and we not only cease to be surprised that rabies should be characterized by hydrophobia in the human subject, while there is no dread of water in the brute; but a consideration of the structure and functions of the larynx in man and the inferior animals, leads us to expect that something like this will occur.

(To be continued.)

Cases or Communications, addressed to the *Editor of the Veterinarian,* at the *Printer's,* (post paid) will meet with due consideration.

John Hill, Printer, Black Horse Court, Fleet Street.

THE

VETERINARIAN.

VOL. I. MAY, 1828. No. 5.

ANATOMY OF THE HORSE.

(Continued from page 113.)

OF THE PELVIS IN GENERAL.

DIVISION. Into exterior and interior, inlet and outlet.

The Exterior presents—in front, the crest and anterior and posterior spines of the ileum; behind, the divergent tuberosities of the ischium; on the sides, the triangular planes of the ilea which are clothed by the gluteal muscles, the acetabula, and between them and the ischiatic tuberosities the rounded smooth surfaces of the ischia over which play the rotating muscles of the haunch; above, the sacrum; below, the symphyses of the pubes and ischia; laterally and inferiorly, between the symphyses and the acetabula, the foramina obturatoria.

The Interior is divided into two compartments by a prominent circumferent line forming the brim of the pelvis: the open irregular space before this line is the inlet or entry; behind it commences the cavity of the pelvis, which again is bounded posteriorly by the outlet. The lateral walls of the cavity are formed principally by the ilea; the ischia and pubes, united at their symphyses, including the obturator foramina, are mostly consumed in completing the cavity below; while the sacrum alone constitutes the superior boundary. The supero-inferior diameter of the brim in the young subject exceeds the lateral; in the adult mare these two diameters, and also the antero-posterior length of the cavity, measuring from the brim to the extreme points of the ischiatic tuberosities, are about equal—about ten inches.

The Inlet displays—laterally, the ilea with thin projecting anterior spinous processes; superiorly, the promontory of the sacrum and the sacro-iliac articulations; inferiorly, the grooves for the psoas and iliacus and the symphysis pubis.

The Outlet presents three notches: two lateral, very extensive; one middle, considerably smaller. The two former, named the great sciatic notches, existing between the posterior borders of the ileum and ischium and the sides of the sacrum, are principally occupied by the sciatic ligaments, although they give transit to the pyramidal muscles, the gluteal and obturator vessels, and the sciatic nerves. The middle notch is the pubic arch, formed by the divergence of the ischiatic tuberosities: it is occupied in either sex by the urinary canal.

OF THE HEAD.

The head is an oblong quadrangular form, broad and flattened on its sides, narrow and contracted anteriorly and superiorly, bulky at the opposite points, hollow interiorly. It is remarkable for the prolongation and capaciousness of the parts devoted to the formation of the nose and mouth, and for the diminished sphere of the cranium. It constitutes the anteriormost part of the skeleton, is articulated with the spine from which it is suspended, and is divided into cranium and face.

I.—THE CRANIUM.

The cranium or brain-case is but small when compared with the bulk of the body in general: it forms the postero-superior part of the head, is prominent and convex superiorly and laterally, irregular and in places open inferiorly, hollow and vaulted within. It is composed of ten pieces:—three pairs and four single bones; *viz.* superiorly and anteriorly, of the two frontals; superiorly and in the middle, of the parietal; superiorly and posteriorly, of the occipital; laterally, of the four temporals; inferiorly and anteriorly, of the ethmoid; inferiorly and in the middle, of the sphenoid; inferiorly and posteriorly, of the occipital bone.

FRONTAL BONES. (OSSA FRONTIS.)

Situation. The frontal bones form the antero-superior part of the cranium, that part which we term the forehead, and which in the living horse is commonly marked with a patch of white hair, denominated a star.

Figure. Irregular. Flat, superiorly; concave, underneath.

Division. Into two surfaces and four borders.

The External Surface is flat and smooth, sometimes even slightly depressed in the situation of the frontal sinus. Projecting from it outwardly is the external orbital process, forming

the frontal arch and articulating with the temporal bone: underneath, the arch is excavated for the reception of the lachrymal gland; and through its inward end is a hole, (in some rare instances, two,) the supra-orbital foramen, for the transmission of a small artery and nerve of the same name to the forehead; below the foramen, internally, is a small depression, marking the place of attachment of the cartilaginous pulley belonging to the superior oblique muscle of the eye. From below and behind the arch proceeds downwards and backwards the internal orbital process or plate, divided into two by a notch into which projects the wing of the ethmoid bone, whose extremity is inclosed in a mortise formed in the base of this plate; this part also articulates, within the orbit, inferiorly, with the sphenoid, posteriorly with the temporal, and anteriorly with the lachrymal and superior maxillary bones. The anterior portion of this process, behind, where it joins the sphenoid, is pierced by the internal orbital foramen, which gives passage to the lateral nasal nerve; the surface behind the posterior portion is smooth and depressed, making by union with it part of the temporal fossa.

The Internal Surface is divided by a vaulted cranial septum into two unequal concavities: the posterior forms a cap for the anterior lobe of the cerebrum, which rests upon the septum, the indentations upon the surface answering to the cerebral eminences; the anterior concavity forms the frontal sinus, whose interior is much enlarged by the slant taken by the septum, and the cavity continues to extend with age until it occupies the entire front of the bone. One frontal sinus is separated from the other by the nasal spine, composed of a lamina from each bone; there are also several imperfect septa traversing the interior of each sinus, partially dividing it into so many different chambers.

Borders. Denticulated and squamous. The posterior or parietal is arched, describing segments of two distinct circles, one running from within outwards, the other from above downwards, and these are overlaid by the parietal and temporal bones. The anterior or nasal border is waving, inclines backwards as well as outwards, is terminated internally by the nasal process, and is overlapped by the nasal and lachrymal bones. The frontal border is straight; broad and triangular anteriorly, where it forms the septum between the sinuses: it unites with its fellow; and has at the place of junction, internally, a slightly elevated longitudinal crest or spine, which with the opposite one forms a groove for the reception of the longitudinal process of the dura mater. The ethmoidal or outer border is irregular, forming a

junction with the lachrymal and sphenoidal, and, by overlapping, with the ethmoidal bone.

PARIETAL BONE. (OS PARIETALE.)

Situation. On the superior and middle parts of the cranium.

Figure. Symmetrical; quadrilateral; vaulted: convex externally, concave internally.

Division. Into two surfaces and four borders.

The External or Convex Surface is divided longitudinally by a mesian *crest*, which is bifurcated anteriorly and marks the course of the suture existing in early life, into two lateral convexities; these are most elevated towards the supero-external angles, and their surfaces, though otherwise smooth, exhibit a few scattered small foraminæ, and are imprinted by the continual action of the muscles covering them, the prints growing deeper with age; and, it appears, the general prominence less. The triangular space between the bifurcations of the crest generally rises above the level of the surrounding surface.

The Internal or Concave Surface is divided into two concavities by an internal crest which is commonly double, having a longitudinal groove in the middle: it is terminated posteriorly by a three-sided process, the parietal protuberance, to which, as well as to the crest itself, is attached the falciform process of the dura mater. In front of this projection the longitudinal furrow ends in the two transverse grooves, which run along the posterior border, between it and the temporal bones: the former lodges the longitudinal, the latter the lateral sinuses of the dura mater. The cavities themselves are adapted to cover the middle lobes of the cerebrum, by which they are indented; they also show the traces of the ramifications of the arteries supplying the dura mater.

Borders. Denticulated and squamous. The anterior is serpentine and unites with the frontal bones; the posterior lies upon the occipital bone; and internally has two short bifid crests growing from it, forming parts of the transverse grooves, from which it extends down, on either side, to the wing of the sphenoid bone; the lateral borders are irregular, and overlaid by the temporal bone.

Development. In the foal, indeed generally until the second or third year, a longitudinal suture is demonstrable dividing this bone into two correspondent pieces.

OCCIPITAL BONE. (OS OCCIPITIS.)

Situation. Posterior and inferior part of the cranium.

Figure. Symmetrical; irregular: presenting convexities and projections outwardly; concavities, and a large circular aperture inwardly.

Division. Into two surfaces, external and internal, and four borders.

The External Surface is divided by a transverse mark into two portions, a super-occipital and a sub-occipital portion, which were formerly two separate bones, and presents, 1*st*. along its median line, and from above downwards, the occipital crest, bounding the occiput posteriorly, and giving attachment to the complexus; below this is the occipital tuberosity, to which is fixed the cervical ligament, with broad, rugged, *posterior occipital depressions* marked by the attachments of the recti capitis postici; still lower is the *occipital hole*, transversely oval, and traversed by the spinal marrow and its membranes, the vertebral artery, and accessory and sub-occipital nerves; below and in front of this hole is the basilar process, articulating with the sphenoid bone, whose under surface shews the basilar fissure, triangular and widening in its course to the occipital hole, where it terminates: to this process are attached the recti capitis antici. *2dly*. On each side, the continuation of the crest, descending to the root of the styloid process of the same bone, into which is implanted the obliquus capitis superior; below this, continued from it, is the styloid process, whose length is regulated by that of the jaws, affording attachment to the obliquus capitis anticus; inwardly to this, bordering on the occipital hole, are the occipital condyles, extending backward for articulation with the atlas, and roughened upon their inner sides by the long odontoid ligaments; between the condyle and the styloid process is the condyloid notch; and in front of the condyles, the condyloid foramina, which are occasionally double, for transmitting the lingual nerves.

The Internal or Cerebral Surface presents, superiorly, the occipital *cupola* for covering the cerebellum, by which the surface is indented; below, formed in the basilar process, the basilar fossa, which supports the medulla oblongata upon its broadest and posterior part, the pons varolii upon its anterior and deeper part.

Borders. The superior is denticulated and unites with the parietal bone; the inferior or anterior, with the sphenoid; the lateral borders join the petrous portions of the temporal bones.

Development. In the foal this bone consists of four pieces;

in after age of two, the above described super-occipital and sub-occipital portions ; in adult life it becomes one entire bone.

TEMPORAL BONES. (OSSA TEMPORUM.)

Situation. Lateral parts of the cranium.

Conformation. They consist of four separate pieces, in pairs, each irregular in its form. One presents a vaulted ovoid plate, surmounted by a curved or hooked projection ; the other is a solid convex form, remarkable for its hardness and whiteness.

Division. In man these pieces are united and are considered as the squamous and petrous portions of one bone : in the horse, although the same names are preserved, the *portions* are in reality distinct bones.

THE SQUAMOUS PORTION. (PARS SQUAMOSA.)

Presents two surfaces, an external and internal, and a circumference.

The External or Auricular Surface is convex, and has projecting forward from its middle in a curvilinear direction the zygomatic process; this unites with a similar projection coming from the malar bone, the two forming the zygomatic arch, against which abuts the frontal arch : superiorly, this process presents a broad concave surface contributing to the temporal fossa, and has a narrow sharpened convexity projecting upwards and backwards from it called the zygomatic crest ; inferiorly, running transversely to its root, is the glenoidal cavity, for the reception of the condyle of the inferior maxilla, bounded in front by a smooth transverse eminence denominated the articular from its being included within the temporo-maxillary articulation, and behind by the anterior mastoid process, which descends in the form of a cone, serves to strengthen and limit the motion of the articulation, and gives attachment to part of the levator humeri. Behind the root of the posterior articular process is *mastoid foramen,* for transmitting blood-vessels to and from the temporal fossa. Farther backward is the orifice of the *temporal conduit,* which gives passage to a vein.

The Internal or Cerebral Surface is concave, to contain and support the posterior lobes of the cerebrum by which it is imprinted, and displays several arborescent grooves which mark the course of the posterior arterial ramifications of the dura mater.

The Circumference, ovoid and elongated posteriorly, is denti-

culated and squamous, excepting at the posterior part, where it is joined to the petrous portion. The superior part lies upon the side of the parietal bone, and behind that upon a very small proportion of the occipital; in front, it lies upon the frontal, and below upon the sphenoid.

THE PETROUS PORTION. (PARS PETROSA.)

Is important from lodging the internal organ of hearing. It presents two parts perfectly distinct from each other in structure, position, and use; one is external or mastoideal, the other internal or cerebral. From the former projects downwards the posterior mammiform or mastoid process, in which is distinguished a base inferiorly, and a crest superiorly: the latter joins the occipital crest. Below and rather towards the front of the process is the external orifice of the aqueduct of the vestibule; directly in front of the process is the external auditory meatus and foramen, surrounded by a jutting oval rim, notched in the middle, which constitutes the auditory process; to the inner side of the meatus is the hyoideal process, surrounded by a prominent circular edge, with which is connected the os hyoides. Behind the meatus is a general protuberance, spheroid without, cavernous within, bottomed by a thin bony shell, within which are inclosed the mastoid cells; proceeding from the inferior, anterior, and inner part of the bone is the styloid process; at whose root are two openings, one below for the lustachian tube, the other above, the styloid foramen, for the chorda tympani.

The Internal Part exhibits three surfaces for consideration. One superior and posterior, smooth though uneven, is excavated for adaptation to the side of the cerebellum, by which it is impressed in places; it has a prominence running across its middle, and just beneath this an irregular aperture having interiorly two distinct passages, one terminated by a cul-de-sac, including a foramen, which leads to the cochlea and communicates through some small pores with the labyrinth; the other, the internal auditory foramen, is for the conduit of the auditory nerves, and communicates with the aqueduct of the vestibule. Another surface, the anterior, contributes a little to the formation of the concavity for the posterior lobe of the cerebrum. The inferior surface, parted from the superior by a fissure, is convex and prominent, but irregularly so: it constitutes the exterior wall of the labyrinth.

The petrous portion is received between the squamous and the occipital bone, and though it is rarely found united with

either of them by bony matter, yet, loose as it is, it is so locked in that it cannot be disjointed but with considerable difficulty and even fracture of some part.

Communications and Cases.

"I have not willingly, wittingly, or wilfully shut the door against any worthy person, nor shall my prejudice (the porter in this kind) exclude any out of my book, who bring merit for their admission."—*Fuller's Worthies.*

ON VETERINARY MEDICAL SOCIETIES.

SIR,

THE veterinary profession is much indebted to you for establishing, through the medium of your journal, a communication between its members. The discoveries and improvements which will be daily made in an infant art may now be widely disseminated; and those errors detected which must necessarily attend us until we are fairly emancipated from the thraldom of ignorance and empiricism.

Something more, however, is wanting if veterinary science would attain that perfection at which we are beginning to aspire. In large towns and populous neighbourhoods, and especially in the metropolis, veterinary surgeons should be brought into nearer contact with each other. The peculiarities, and advantages, and defects of the practice of each would then be discussed and turned to mutual advantage. A friendly connexion and feeling would be produced and encouraged. Little jealousies, and misconceptions, and misrepresentations would cease to divide and injure us. We should become more identified with the common interest and respectability of our art; and we should form that bond of union, which would, in spite of apathy or interested opposition, secure the rapid advancement of veterinary science.

The London Veterinary Medical Society is an excellent institution of this kind; but it is principally confined to pupils. It is adapted to their situation and wants. It is contrived to put

to the test their knowledge of minute anatomy, and the grand principles of physiology and pathology; and if those only whose studies have prepared them for the subject would join in the discussion, the advantage to be derived would be very great.

Gentlemen who are established in their profession may have forgotten some of the steps by which they obtained enlarged and accurate views of practice, and may not choose to be cross-questioned by youngsters whose attention is properly directed to the objects which border the path they are compelled to climb, but who have not been cheered with the sublime prospect to which that path conducts.

Whether it may be possible so to modify this truly valuable institution, as to allure the established practitioner without sacrificing the interest of the pupil; or, whether it may be advisable, in a more centrical situation, to found a society of practitioners, on the plan of the London and Westminster Medical Societies, but to which respectable students may be admitted, are questions that may deserve consideration. There cannot, however, be a doubt, that, next to the diffusion of a liberal veterinary journal, the periodical meetings of veterinary surgeons would essentially promote the cause we have at heart.

I trust some veterinarian, of greater weight than the humble individual who now addresses you, will exert himself in accomplishing this most desirable object. An ardent spirit of inquiry begins to actuate the members of our profession, and it will be our own fault if we attain not that estimation which the importance of veterinary science justly claims.

T.

ON RABIES CANINA. *By* W. YOUATT.

(Continued from page 144.)

THE symptoms which have been described clearly indicate that rabies is a nervous affection, and particularly an affection of the respiratory system of nerves, or those which are employed in the instinctive and involuntary actions connected with respiration, and which serve to associate many of the voluntary muscles in the discharge of the same function. These nerves arise from the medulla oblongata, in which, or on its membranes, inflammation is almost invariably detected. They do not spring from the same columns with the other spinal nerves; and they have roots peculiarly constructed, and following one another in an uniform

line, as if they were leagued in the performance of the same office.

They are the portio dura of the seventh pair, distributed over the face; the glosso-pharyngeus, which supplies the pharynx and the tongue; the par vagum, wandering to the pharynx, the larynx, the heart, the lungs, and the stomach; the recurrent, ramifying on the muscles of the larynx, and the membrane of the glottis; and the spinal-accessory given to the neck and shoulder, and reaching even to the loins.

The twitchings and contraction of the eyelids, the strabismus, the spasms of the cheek, and lips, and face, and the paralysis of the muscles of the lower jaw, sufficiently prove an affection of the portio dura.

The protrusion of the tongue, the enlargement of the sublingual and other glands, the inability to swallow, and the alteration of the voice, implicate the glosso-pharyngeus.

The increased circulation, the laborious respiration, the peculiar inflammation of the pleura, and the constant and often intense inflammation of the stomach, are attributable to the par vagum.

The involuntary barking, the husky grating inspiration, the frequent inflammation of the trachea, the uniform inflammation of some part of the glottis in the quadruped; and the dreadful excitation of the membrane of the glottis, with all the horrors of hydrophobia in the human being, testify that the recurrent nerve has not escaped: while the hurried and uncertain action of the fore extremities, and the palsy of the region of the loins, are clearly to be traced to the spinal-accessory.

These nerves anastamose freely with the cerebral nerves, therefore cerebral affection soon occurs. There is a state of general and extreme excitation, a very peculiar wandering and delirium, and, in some animals, fits of savage and uncontrolable ferocity.

They likewise unite and blend with the ganglionic nerves, and thence proceeds altered secretion—a morbid secretion of the gastric juice occasioning the strangely perverted appetite of the dog; and a still more depraved secretion of the saliva, converting that bland and innocuous fluid into the direst poison.

Dr. Parry approached the subject, when he asserted that it was principally an affection of the *organs* of respiration*. The

* Let his uncandid review, and gross mis-statement of some cases published by me 15 years ago, be now forgotten. The wound rankled for a while, and the more so, as inflicted by the friend and fellow-student of my father. He now sleeps in peace. He was a scientific practitioner, and a good man.

circumstances which I have stated seem to prove, that it is a disease not so much of the *organs* of respiration as of those nerves which bind together numerous portions of the frame in the discharge of that function.

What is the cause of this sad disease?—The saliva of a rabid animal received into a wound, or on an abraded or mucous surface.

Hydrophobia has been produced in the human subject by the power of imagination, or by strong excitement; but the disease has materially differed from rabies in its symptoms, progress, and termination.

No one, I fancy, will deny, that in man, in the horse, in cattle, sheep, and swine, rabies is caused by inoculation alone; but it is said to be spontaneous in the dog and his varieties. If, however, its spontaneous origin be denied in so many animals, where is the proof that it arises in any animal without the contact of the rabid virus? Heat, thirst, and putrid meat, are supposed to be exciting causes. Scarcely a week passes during the summer season without some earnest exhortation from the sage editors of the daily press, to give our dogs plenty of water. I would ask for one authenticated instance in which rabies has been produced by the most highly putrid meat, by extremity of thirst, or even by the heat of a vertical sun.

Rabies occurs almost as frequently in the spring, the autumn, and the winter, as it does in summer.

At the Veterinary School at Alfort, three dogs were selected as the subjects of some very cruel but decisive experiments. It was during the heat of summer, and they were all chained in the full blaze of the sun. To one, salted meat alone was given; to the second, water only; and to the third, neither food nor drink. They all died; but not one of them exhibited the slightest symptom of rabies.

Am I asked,—If the disease be now propagated from dog to dog by inoculation alone, whence did it at first arise? I should not entertain a very high opinion of the querist; nor should I be in haste to answer him, until he had told me whence arose rubeola, variola, or syphilis. They sprung from some unknown morbid action, and, having once spontaneously arisen, each is now propagated in its own way.

But are there not some diseases communicable by contact, and yet generated also? Most certainly there are. Glanders in the horse and distemper in the dog are both generated and communicated.

One thing however is certain, that every disease is governed by its own laws. The cow-pox, glanders, and syphilis are com-

municable only by the contact of the virus with an abraded or mucous surface. The small-pox, and distemper, and malignant fevers, by the halitus, or through the medium of effluvia, or by the slightest contact, as well as by inoculation. Psora, glanders, distemper may be communicated, or bred. Syphilis, the measles, the small-pox, the scarlet fever, are never generated. Each has its own mode of action, and is governed by its own laws; and experience alone can determine what those laws are. That which is known of one disease, cannot with certainty be predicated of any other. Reasoning from analogy is here dangerous and inadmissible. We appeal to facts, and to facts alone we bow.

There is no disease of which earlier mention is made than of rabies. In the records of three thousand years ago we read of the rabid or mad dog. The malady, however, is yet confined to certain parts of the globe. It has spread where it could be conveyed by inoculation. Where there were no means, or difficult means of communication it was not diffused. It has not yet found its way to the West-Indian islands, or the Indian Archipelago, or Syria, or Egypt, or the south of Africa, or any part of the continent of South America*. The unfortunate dogs are tortured with heat, and thirst, and starvation. They are exposed to every probable, and every possible cause of rabies, yet the disease is unknown.

Dr. Heineken tells us, that curs of the most wretched description abound in the island of Madeira: that they are afflicted with almost every disease; tormented by flies, and heat, and thirst, and famine, yet no rabid dog was ever seen there.

No one will affirm that rabies is caused by a particular state of the atmosphere. It occurs at all times of the year, and in all variations of moisture and temperature. In many countries it has long committed its destructive ravages; but in others, placed in the same latitude, with a similar temperature and climate, and where every predisposing or exciting cause has been, so far as we can judge, the same, it has never appeared.

* M. Unaneu gives a strange account of the supposed ravages of hydrophobia, on which, even if the facts were to be depended upon, no comment need be made. "Hydrophobia appeared for the first time in the summer of 1804, in the north of Peru, during an excessive heat, during which Fahrenheit's thermometer was sometimes at 99½°. Nearly all the animals were seized with madness, especially dogs. It was only in 1807 that it appeared in the capital. In the town of Jea, 42 persons died of the bites of rabid dogs. On the north coast the disease developed itself spontaneously in several individuals. *In* 1808 *the disease disappeared. In some dogs the disease made its appearance twice;* but a bite from the animal with the second attack was not followed by any serious consequences." ZEITS VON HENKE.

In nineteen cases out of twenty the inoculation can be proved. In almost every case the possibility of it cannot be denied. Who, under circumstances of peculiar excitement, has not possessed many times his usual strength? The dog, labouring under the dreadful excitation of rabies, and bent on the work of destruction, will overcome obstacles which would at other times be insurmountable.

During the life of the late Duchess of York, a mad dog wandered into Oatlands Park, and penetrated into divisions of the menagerie to which it would have been thought magic alone could have conveyed him. He was destroyed in one of the divisions into which, the gate being closed, I should have said that it was impracticable for man or beast to have entered.

Some dogs, however, are rarely out of their owner's sight. Even in this case I can easily conceive the possibility of inoculation. There is no battle. It is, in the great majority of instances, one simple bite. The object of the animal is not to contend for victory, or to worry his antagonist. He acts from an irrepressible impulse, and, the mischief being effected, pursues his course. I can believe, that if a favourite dog has but for a moment lagged behind, the injury may be inflicted without the owner's observation; or, that the trifling, every-day occurrence of two dogs snarling and snapping at each other, may be soon forgotten. Did the disease immediately follow the bite the short contention might be remembered; but weeks and months intervene, and he must have a retentive memory, or nothing else to think about, who will invariably, and long afterwards, recollect circumstances so trivial.

I am purposely labouring this part of the subject, because it must form the proper ground for the interference of the legislature, at no distant period, to restrain the ravages of this dreadful disease, which has most alarmingly increased and is yearly increasing. If the account here given of the origin of rabies be correct, the preventive measure is not difficult to imagine.

The rabid virus must be received on some abraded, or wounded, or mucous surface. On the sound integument it is harmless. There are a thousand proofs of this. Almost every author acknowledges it; and the writer of this essay has, with perfect impunity, had his hands many times covered with the saliva of the mad dog.

I have said that the virus must be received on an abraded or mucous surface. The case, however, is not so clear with regard to the latter. A father, in the last stage of rabies, imprinted a parting kiss on the lips of his child; the infant died hydrophobous. A maiden would not be parted from her lover, and

lavished on him her caresses, and escaped. The lips of the child might be chapped, those of the young woman might be unbroken.

A man endeavoured to untie with his teeth a knot that had been firmly drawn in a cord. Eight weeks afterwards he perished, undeniably rabid. It was then recollected, that with this cord a mad dog had been confined. A woman was attacked by a rabid dog, and escaped with the laceration of her gown. In the act of mending it, she thoughtlessly pressed down the seam with her teeth. She died. A physician, attached to a faithful spaniel on which symptoms of rabies were too apparent, ordered it to be destroyed; but, with pardonable weakness, he first kissed the poor animal. He paid the penalty of his imprudence with his life.

There is a strong attachment between the Danish dog and the carriage horse. It is pleasing to witness the interchange of caresses between them. Not even under the strongest excitement of rabies will this dog bite his companion and friend; but I know more than a dozen instances in which the Dalmatian has died rabid, and the horse has speedily followed him.

Bread, smeared with the saliva of a rabid dog, has been eaten by another dog without the slightest bad consequence; but two horses that had been suffered to devour the litter on which some rabid pigs had lain were lost.

This is a question, then, which cannot be perfectly decided. It is possible that the lips of those who unfortunately perished might have been abraded; but I confess, that the strong inclination of my opinion is, that the virus cannot be received on a mucous surface without imminent danger. Syphilis and glanders are much more frequently communicated by contact with a mucous than an abraded surface.

In what secretion of the rabid animal does the virus reside?—In the saliva, and in that alone.

Some authors, describing the post-mortem appearences of rabies in the quadruped, have asserted that there is no inflammation or enlargement of the salivary glands. I can only say, that this is contrary to my experience. The parotid and sublingual glands have been almost invariably affected, and frequently the submaxillary.

Trolliet imagines that the mucus secreted in the bronchial passages is vitiated, and communicates the disease. I have seen considerable inflammation of the bronchiæ, and the passages have then been filled with viscid, and, occasionally, bloody spume; but, in the majority of instances, there has been no injection of the membrane, or undue secretion of mucus. The

proper test would be to inoculate with the spume from the bronchial tubes. M. Trolliet has not done this; and I take some shame to myself for losing several opportunities of setting this question at rest.

At an uncertain, but not late period of the disease, there is an increased secretion of saliva, apparently of the natural consistence; in four-and-twenty hours it becomes more inspissated, and then begins to irritate the fauces, either by adhering to them, or by the acrimony which it acquires. At that stage of the disease when the dog fights at the corners of his mouth to get rid of something which dreadfully annoys him, the secretion of saliva does not exceed its usual quantity, but is more viscid or acrid.

Does the rabid virus retain its energy after the death of the animal?—This is an interesting question to the veterinary surgeon, who is so often called on to examine the rabid animal, and it does not appear to have been sufficiently examined into. Indeed it has seldom been mooted. Medical men have taken it for granted, that the disease might be communicated by the saliva with equal certainty before and after the death of the dog. As opportunity serves, this shall be put to the test of repeated experiment.

My present belief is, that the power of the virus ceases with the life of the animal. At all events, I have hitherto escaped, although, in many dissections, the saliva, notwithstanding considerable care, must have come into abundant contact with my hands, and they were not always sound.

THE VETERINARIAN, MAY 1, 1828.

"Licet omnibus, licet etiam mihi dignitatem *artis veterinariæ* tueri."—*Cicero.*

ON Wednesday the 9th ult. was the anniversary dinner given by the students of the Veterinary College, in honour of their professors and those lecturers whose theatres had been liberally thrown open to them.

Sir Astley Cooper (president of the Medical Examining Committee) was in the chair. He was supported by Sir William Blizard, Drs. Ager, Babington, and Pearson, and Messrs. Brookes, Bransby Cooper, Mayo, and Tyrrell. Among the veterinarians present we obsersed the Assistant-Professor, Messrs. J. Field, W. Goodwin, King, Lushington, two Percivalls, two Turners, Vines, Youatt, and many others.

A gloom was cast over the early part of the evening by the absence of the professor, who was slowly recovering from a severe and protracted illness. After a few toasts however had been given he appeared, but was compelled again to retire much sooner than his friends and pupils wished.

When the health of the Duke of Clarence was proposed, it was announced that His Royal Highness had condescended to become the President of the Veterinary College.

The usual, or more than the usual routine of introductory toasts was drunk, in prefacing which the worthy chairman, from his own singular kind-heartedness, described every public man as a patriot, and every medical man as a paragon of skill, honour, and humanity.

It was, indeed, highly gratifying to see so many eminent men, of whom the medical world might justly be proud, honouring with their presence the anniversary of an inferior profession; but when Sir Astley complimented Sir William, and Sir William eulogized Sir Astley; and Sir Astley flattered Dr. Babington, and Dr. Babington panegyrized Sir Astley, and so on to the end of the chapter; it no doubt was very pleasant to the parties, and "each deserved what each did say of other;" but the business of the evening almost stood still.

Two sentiments however were elicited from Sir W. Blizard and Dr. Babington, which more than compensated for our little trial of patience. It did our hearts good to see the former, almost a centenarian, the snow of age scattered around his countenance, yet that countenance irradiated with strong and pleasing expression, while he avowed his undiminished love for

science, and his ardent good wishes for us: and he may be assured that we will treasure in the tablet of our memories his admirable advice, "Remember, gentlemen, that your reputation and success must be founded on the union of science and humanity." Yes! the time is not far distant, although you, venerable teacher, may sleep, but not forgotten, when every good veterinarian will vindicate his claim to general estimation, by the inseparable union of "science and humanity." How much do these words import!

Dr. Babington's was a kindred sentiment. "I wish," said he, "that the veterinary surgeon could be sent into the country with all the learning of the human physician, and then the veterinary profession would be estimated as it deserves."

Gentlemen! in our own names, and in the names of the profession we thank you. When this is your publicly-expressed and now recorded opinion of what we ought to be, the march of improvement (abused, important term) must be certain and rapid.

The health of the chairman was then given; when his natural, unsophisticated, glowing expressions of zeal in our cause, more deeply impressed on us all those sentiments of sincere respect and ardent gratitude, with which the name of Sir Astley Cooper will ever be associated in the mind of the veterinarian.

At length, although somewhat too late, the true business of the evening was entered upon. The chairman proposed the health of Professor Coleman, whom, he said, he had known for forty years, and, with every succeeding year, his esteem for him had increased, and his friendship had been more confirmed. He sketched his career as a surgeon. His researches into the subject of suspended respiration, which laid the foundation for his future fortune. He adverted to the rapid increase of the veterinary school. Mr. Coleman's first class consisted of fourteen;—it now exceeded seventy. These students were no longer farriers; they were veterinary surgeons. No longer ignorant and despised, but, except by their own fault, men of science

and justly appreciated. He glanced at Mr. Coleman's doctrine, that catarrh and pneumonia might and did oftener proceed from transitions from cold to heat, than from heat to cold; and the consequent system of stable ventilation which Mr. Coleman advocated and established. He spoke of the rescue of the humoral pathology from thorough oblivion, by the result of the transfusion of the blood of glandered horses. He concluded by saying, that although Mr. Coleman had lately suffered much in health, he was persuaded he would soon renovate, and resume with additional zeal and effect, the discharge of the duties of his office. He might be a little foot-foundered, but it would be long ere the disease would reach the coffin-joint.

As soon as the acclamations with which this toast was received had subsided, Mr. Coleman rose, and, so far as our recollection serves, addressed us as follows :—

"Mr. President and Gentlemen! I have just left my bed, and if I had taken the advice of my friends, I should have been in bed at this moment; but I sometimes venture to prescribe for myself, and although I knew that rest would be beneficial in my complaint, yet as I had a duty to perform, and that duty was to be present in this place, at this time, I felt satisfied that the best remedy for my malady was the pleasure of seeing my friends on this important occasion. I therefore resolved to do that which was most agreeable to my own feelings, and I am happy to say that merely the sight of my numerous kind friends has already been of service."

Mr. Coleman then passed a glowing but just eulogium on the talents, liberality, kind heart, and private virtues of the chairman, and continued, that "Sir Astley had a great dislike to dine at public meetings, and in particular to preside at such meetings. This year, and the preceding year, he was solicited to be president at the anniversary dinner of Guy's Hospital; and where his company would have been received as a particular favour. Sir Astley did not attend at either of those dinners,

but he has come here to support our institution, and to support his friend, for which I beg leave to express my grateful acknowledgments.

"I have also the honour to return my warmest thanks to those distinguished visitors who have favoured us with their company this day, and who have so liberally admitted the veterinary students to their lectures. The information the pupils receive from human anatomy and physiology, the principles and practice of surgery, materia medica, and chemistry, as taught by these eminent teachers, is not only most important knowledge to veterinary students, but they obtain a character for science they could not receive from the veterinary college alone.

"I feel particularly obliged to those numerous veterinary practitioners, who have given us the pleasure of their company at this anniversary dinner; and, although last, but not least, I must not forget my junior friends, my present pupils, with whom originated this dinner, and who, with so much feeling, addressed a most affectionate letter, signed by upwards of sixty students, to desire me to remain at home, until my health was completely restored; when a publication, not necessary for me to name, assured the public that my pupils were '*without exception* dissatisfied, discontented, and indignant.' That I should have enemies is not extraordinary. Few persons in any public situation are without. I trust and believe, in number, my opponents are few, but in zeal, and in talent, I know their power is great.

"I am well aware that many veterinary surgeons are as competent, or more competent, to teach the veterinary art than myself; and I am proud to make this acknowledgment. The original intention of the governors of this institution was to form a school, in which it was expected that each succeeding generation should have more professional knowledge than their predecessors. Is it therefore a fault in your present professor, that he should have instructed pupils better informed than himself? Was it a discredit to Mr. Cline that Sir Astley Cooper

and Mr. Green were his pupils? I know, on the contrary, that Mr. Cline was proud, and justly proud, that these eminent characters had been educated by him. I am not anxious to exclude talent from the veterinary college, or to prevent veterinary surgeons from giving lectures in the neighbourhood of the college. A fair and honourable opposition, on the same liberal principles as in other schools, would be a benefit to the public; but my opponents have preferred anonymous calumnies. Were I Sir Astley Cooper, and Sir Astley Cooper your professor, then indeed your professor might treat all opposition with contempt; but I require all the aid of my friends, and in due time I shall most willingly resign."

The chairman next gave "The health of the Assistant-Professor," to whom we were indebted for the revival and establishment of the operation of neurotomy, by which the usefulness of many valuable horses had been prolonged, and ease had succeeded to torture; and for his discovery of the efficacy of the sulphate of copper, in those affections of the schneiderian membrane which resembled glanders, or were supposed to be characteristic of that disease.

Mr. Sewell said he had long been a diligent and an honest labourer in the cause of veterinary science, and, in spite of opposition or calumny, he should continue to devote every energy to the improvement of the art. They who were so eager to abuse and displace him and his colleague should neither frighten them from their places nor their duty.

Next was given "The Examining Committee," among whom our old and tried friend Dr. Pearson was particularly mentioned; and to whom we were not only indebted as an impartial yet kind examiner, but who had set us right in an important point of anatomy. He had subjected the fatty frog to chemical analysis, and the d—l a bit of fat had he found in its composition.

Dr. Pearson was most happy in his own name, and that of his brother-examiners, to testify his satisfaction and even surprise at the general attainments of the pupils, alike creditable

to their industry and the ability of their teachers; and little farther was wanting in the veterinary school, but more time for the labours of the students.

He considered the veterinary establishment as a new æra in science, and predicted that human anatomy and physiology would be more indebted to the Veterinary College, than to any other source since the time of John Hunter. Works had been produced by veterinary surgeons that would do honour to the best anatomists and physiologists, and the public would duly appreciate the men who had so materially advanced their own art, and contributed to the improvement of general medicine.

Yes! venerable instructor, kind friend, whose pleasant stories, and whose valuable precepts, and whose ardent zeal in our cause, will long live in our recollection, thy prediction shall be fulfilled. Thou has described us, not what we have been, or what we are, but what we shall be: and not only the voice of partial kindness but of strict and stern justice shall, ere long, acknowledge us, as useful and valued, but still inferior fellow-labourers in the cause of medical science.

The chairman next gave "the healths of those Gentlemen who had gratuitously admitted the Veterinary Pupils to their Theatres;" and whom he justly described as distinguished equally for their attainments and skill, and their zeal for the progress of medical knowledge, not only in their own schools, but in this inferior, yet promising and valuable branch of the art. He particularly adverted to Mr. Brookes, whose talents and perseverance, and happy mode of imparting anatomical knowledge, he warmly eulogized; who had collected a museum scarcely equalled by any in this or any foreign country, and who now, with a high and well deserved reputation, had retired from the labours of his profession.

Mr. Brookes returned thanks. He had never the vanity to suppose that he possessed that superior merit which the illustrious baronet had kindly attributed to him, and the sincerity

of whose good opinion had been proved by the fact that he had placed his nephew, Mr. Bransby Cooper, under his professional tuition. Whatever talents, however, he, or those with whom his name was now associated might possess, had been honestly devoted to the improvement of medical science: and never more pleasingly, or with more effect employed, than when the students of the veterinary college formed a portion of their audience.

The health of Mr. Vines was then drank, for his kind attention to the veterinary students, and the important information they often derived from him; and, afterwards that of Mr. J. Turner, for his discovery of the navicular disease. These gentlemen returned thanks in appropriate terms.

The health of Mr. Dick was proposed, who had established a veterinary school at Edinburgh.

Mr. Coleman proposed the health of Mr. W. Percivall, whom he had known from his infancy, and whom the veterinary world knew as the author of a very excellent elementary treatise on the art.

Mr. Percivall briefly returned thanks, modestly disclaiming the consciousness of meriting the warm applause with which the toast had been received, but assuring us that his heart was, and ever would be devoted to the interest and improvement of our art.

The writer of this article however begs leave to assure him, that that merit which he modestly disclaims, is acknowledged and felt by every veterinarian, and we are eagerly expecting a new and improved edition of his most valuable work, which will establish his usefulness and his reputation on a yet broader and firmer basis.

Sir Astley Cooper now quitted the chair, after addressing us in words of ominous import, but to which we would fain hope that we affixed a wrong meaning. "Gentlemen," said he, "the advice which I am about to give you is probably the last that I shall have the opportunity of offering to you. Make yourselves

masters of your profession, or you ought not to prosper : attend diligently to the duties of your profession, or you cannot prosper : and preserve your moral character unstained, or you will not be esteemed or happy, however you may seem to prosper."

If these are indeed "the last words of Marmion," our young friends will treasure them in their memories : but we do hope, that, for many a year, we shall see him, who is at the head of his own profession, and to whom we owe so much, presiding at our anniversary festival. He shall freely indulge in what perhaps we thought a little too prolonged and indiscriminate panegyric. It might be our selfishness, or our jealousy, or our exclusive attachment to our humble profession, that made us fancy a failing, that yet "leaned to virtue's side." If we are to see him no more, our best wishes follow him to his dignified retirement. There are few men to whom we are so much indebted, no one whom we more cordially esteem and more truly admire.

Mr. Sewell was now called to the chair. He proposed the health of Mr. Youatt, who during the illness of the professor had admitted the veterinary pupils to his theatre.

Mr. Youatt was not aware of any claim he had to the marked approbation of such an assembly, except his avowed and firm determination to exert his feeble energies, in vindicating the respectability and effecting the improvement of the veterinary art.

The meeting now assumed a more convivial character. Some excellent songs were sung, (Mr. Lushington had previously favoured the company with two admirable ones,) and all departed before confusion and riot had *quite* usurped the place of order and decorum.

The anniversary dinner of 1828 will be regarded with peculiar interest by every veterinarian.

The venerable Sir William Blizard tells us, that "our reputation and success must be founded on the union of science and humanity." Dr. Babington would have "the veterinary surgeon sent into the country with all the learning of the human physician." Dr. Pearson acknowledges that "a more extended period of study is necessary to form the well qualified veterinary surgeon, and anticipates the period when human medicine will acknowledge itself more indebted to the veterinary profession than to any other source since the time of John Hunter:" and Mr. Coleman says, that "it was the original intention of the governors of this institution to form a school in which it was expected that each succeeding generation should have more professional knowledge than their predecessors."

These are signs of the times, which he who runs may read. They announce the rapid improvement, and speedily established respectability of our profession, and woe unto him who would presumptuously, but vainly endeavour to arrest the progress of science!

Mr. Coleman speaks of those who have preferred against him anonymous calumnies, and he implies that it was with the intention of driving him from his situation. Anonymous calumnies shall never disgrace the pages of "The Veterinarian:" and we frankly acknowledge that we cannot yet spare him. We know not these "veterinary surgeons who are as competent, or more competent than himself, to teach the veterinary art." We cannot yet spare him, for we could not supply his place. But we want him to read these signs of the times, and to co-operate with us, and with every good veterinarian in vindicating the dignity of our profession. He has the power to do us much good, and, we trust, he has the will.

The system of education pursued at the veterinary college, even if it embraced all the objects which it was originally designed to embrace, would suit only the infant state of the art. Much alteration is required when the number of the pupils has so much increased, and the rank which they may occupy in soci-

ety is so different. We will not conceal our firm opinion that the whole system requires and will, at no great distance of time, undergo a thorough change.

Two professors might be sufficient for fourteen pupils. They were sufficient for trying the experiment as to the possibility of permanently establishing a Veterinary College. When, however, the class consists of seventy or eighty, many from the inferior, but some, and more if they were encouraged, from the superior ranks of society—when the veterinary surgeon is, by virtue of his profession, a gentleman—when "his success is to be founded on the union of science and humanity"—when "he is to be sent into the country with all the learning of the human physician"—when "the medical profession is to be more indebted to him than to any other source"—when "each succeeding generation is to have more professional knowledge than their predecessors," the system pursued at the college will not effect these desired objects.

The college *is* established. The funds are ample. They are sufficient to afford a moderately remunerating salary to additional professors, and Mr. Coleman tells us, that "he is not anxious to exclude talent from the veterinary college."

Let Mr. Coleman be director of the college. If we somewhat re-model the institution, we do not want to get rid of him, for we should not find a better man. Let him continue to deliver his physiological and pathological lectures.

Let Mr. Sewell remain as the clinical instructor, and let it be an indispensible part of his duty to describe disease, and the indications of cure, while standing by the diseased animal.

Let an anatomical teacher be selected, and, under him an efficient domonstrator, who shall at certain hours in the day be invariably found in the dissecting room.

Let there be likewise a chemical professor, who, so far as it may be necessary, shall explain the fundamental principles of chemistry, and their application to medicine; the nature of

drugs; the routine of pharmaceutical operations; the first principles of agriculture; and the outlines of medical botany.

And, last of all, by means of another professor, or by the director, or clinical professor, let the instruction of the college extend to all domestic animals—those that, in the aggregate, are even more valuable than the horse—with regard to whom the veterinary surgeon will be often consulted, and the medical treatment of whom is taught in every school but ours.

From the united talents of these men, let the student find within the walls of the college all that he can require to qualify him for his profession. The teachers of human medicine are kind and liberal. Never will the veterinary pupil forget what he owes to those gentlemen in whose theatres he has been permitted gratuitously to obtain important knowledge. Nevertheless, it is a system which we dislike. It has an air of pauperism about it, which does not suit with that rank in society to which we are now permitted to aspire. Although we, at present, experience much kindness, and sincere friendship from the professors of human medicine, they will not do full justice to us while we are educated at the charity school.

We are, however, sketching that which will not immediately take place, although some of us will live to see it. The road is not yet sufficiently paved, but public opinion will, ere long, give us all that we desire.

In the meantime much may be done.

Anatomy is the only foundation on which the superstructure of medical science can be reared. The laws of the college, as at present constituted, provide for the adequate instruction of the pupils in this fundamental branch of their art. Are these laws carried into effect? Is there an efficient demonstrator? Is he always at his post? The poor students, poring day after day over their subject, "puzzled in mazes, and perplexed with errors," feelingly and bitterly complain. Mr. Coleman regularly promises in his early lectures that there shall be a

demonstrator, or rather he asserts that there is one. Is he, we ask again, always, or ever at his post? Why is this inexcusable neglect suffered to continue from year to year?

If we are not wrongly informed Mr. Coleman would have gone further. He would have introduced an anatomical teacher at the college. Who or what prevented him? Where was the obstacle? We would fain know who or what arrests the progress of improvement!

Clinical Instruction! how important and how sadly neglected! Diseases are no more to be learned from lectures, than anatomy from books. The most faithful detail of symptoms, and the most judicious rules for the general treatment of disease will not be sufficiently embodied in the mind of the student. The diseased animal must be placed before him. He must have ocular demonstration of the symptoms by which the malady is characterized. He must have the opportunity of studying the mode of treatment, evidently dependent on the nature and intensity of the symptoms, and varying with their changes. Then, and then only, will the grand principles of pathology be indelibly engraved on his memory. Fifty minutes employed in as many cases, and not one-tenth part of the pupils aware either of the disease or the means resorted to! This is not the way to educate the veterinary surgeon.

We were pleased to hear that, previous to, and since his last illness, Mr. Coleman regularly went through the Infirmary on his lecture mornings, and sometimes discoursed at considerable length on the nature and treatment of the diseases which passed under his inspection.

We entreat him to continue this most essential part of his duty, and to extend his observations to *all* the maladies which may present themselves, and, particularly to those of every-day occurrence. The foot is an important organ, but there are others not less so, and almost as frequently diseased. Grease is a stubborn malady, but there are others as intractible and

more dangerous. One good clinical lecture is worth a dozen in the theatre, aye, even of his; and he may depend on it that his reward will be certain and dear to him, the rapid improvement and ardent gratitude of his pupils.

The veterinary surgeon has occasionally to perform very serious operations on the living animal; and on his adroitness in operating, more than on his skill in pathology, will his reputation depend. How is he to be qualified for the performance of this part of his duty? Will lectures suffice, or the mere fact of his having been present at the operation, and, jostling among his fellow-pupils, getting a momentary glimpse of what is going forward?

Practice alone will teach him. Where is he to acquire it? At the knackers? Is he there; and, with no preceptor even there to guide him; is he there to torture and to mangle a miserable animal? We know not who gave him the right to do this; but we do know the bar at which he must hereafter answer for the usurpation of this right.

In an establishment like the veterinary college there will always be sufficient cases; and we hold it to be essential, that every student, after being examined as to his correct anatomical knowledge, so far as it relates to the operation in question, shall, under the superintendence of a professor, perform all the leading operations. With the professor at his elbow, and the reason of each step, and the danger which threatens each, being pointed out to him as he proceeds, he will become a more skilful operator than a thousand lectures could make him, or many a mangled subject when left to himself.

The Forge! Are the students taken into it, and made to go through the different processes? To be able to take off and put on the shoe, and to pare out the foot, and to obtain the perfect use of the drawing knife, and adroitly to perform many operations on the foot; these are things advantageous to the town-practitioner, and indispensable with him who practices in the

country. The professor dwells much, and properly, on the structure of the foot, and the functions of its various parts Why is the practical management of the foot so sadly neglected?

Dressing! Each student is required in his turn to give the medicines prescribed, and to go through the different manipulations of bleeding, blistering, rowelling, &c. But there is a right and a wrong way of doing these things; a neat and scientific. and a bungling way. Does any authorised person attend the dressers, to see that every thing is done, and done properly? We apprehend not.

Pharmacy, and the preparation of medicines! Are the students taught the nature of drugs, and the method of compounding them? Is this a matter of indifference? Go into the dispensaries of many veterinary surgeons, and observe the rude and disgraceful way in which the medicines are kept and combined!

Lectures! Health is not at our command. That of the professor has lately much suffered; and for several successive weeks he was unable to enter the theatre. As soon as he was able, and even before prudence would have permitted, he resumed his lectures, and daily delivered them until the lost ground was regained; but, during his illness no substitute appeared, and no lectures were delivered. Is there no provision against this? Is not the assistant-professor in such case compelled to discharge the duties of his principal? Or, before he can do this, or the professor can appoint another substitute, must the governors be consulted? Who are these governors? Where do they meet? and when? What difficulty attends their assembling? What time would it occupy to convene them? The health of the professor may again be impaired. The time of the student is most precious, and ought not to be, and *must* not again be sacrificed.

We proceed to a more serious complaint, the short period of the attendance of the pupils. In six, seven, or eight months,

many young men, who scarcely knew a horse from a cow, are considered to be duly qualified to practice as veterinary surgeons, and sent into the world with license to kill or to cure. The thing is preposterous, ruinous. The applicant for a diploma to practice human medicine would be rejected with indignation, if his instruction occupied no longer space of time.

There are no miracles now-a-days. Diligent and long continued study can alone prepare the pupil for the honourable pursuit of his profession.

The effect of the present system is, that not only are too many veterinary surgeons thrown upon the world utterly incompetent, and therefore bringing sad disgrace on the profession, but the young man whose friends have rightly conceived, or whose own good sense has taught him, that in a few short months he could not acquire that reputation and skill on which his future reputation could alone be founded, labours under a most injurious stigma. He must be exceedingly stupid, or incorrigibly idle, if he whiles away so much time, when another, in one-third of the period, obtains his diploma.

We know more instances than one in which a six and an eighteen-month student have settled in the same neighbourhood, and the former would not bear one moment's comparison with the latter. Yet the former considers it a feather in his cap, and publicly boasts of having so rapidly obtained his diploma; and, for a while, and to a certain extent, triumphs, while the man of real knowledge is neglected.

Some students do not hear two-thirds of the Professor's lectures. How is this? Are these lectures unnecessary? Do they convey no information? Can the student be prepared without the most essential part of them? Are they paying so much for that which can be readily dispensed with? We will push this no farther.

But there is an examining committee before whom the student must appear; and it is composed of the most eminent teachers, competent to decide, and whose honour is

without a stain. We admit their unrivalled skill and their honourable feeling and conduct; but to their competence we do seriously demur. They have a tolerably accurate knowledge of the anatomy of the horse; but they have studied him as amateurs and not as a profession; and we could easily point out some errors with regard to the horse, and more with regard to cattle, in the works of as good comparative anatomists, Blumenbach, Cuvier, and Carus. They are good physiologists. But what do they know of the diseases of the horse, their minute symptoms, their actual seat, their strange method of treatment. They dare not push their questions far, no, not even in anatomy, with an intelligent pupil; and, as to pathology, they must pin their faith on the professor's sleeve. But he may have singular and erroneous notions of various diseases. Dare the student to differ from his professor?

We will not say that this necessarily leads to abuse, to favouritism, or to persecution; we will not say that free inquiry is stifled, and that it is necessary for the candidate to believe in a certain creed; but it has given an opportunity for the malicious to prefer this charge, an opportunity which the professor should be most anxious to remove.

We would not displace those gentlemen to whom the veterinary art owes so much, and whose association confers such honour upon us; but we would add to them a certain number of our own profession, who are best able, *who alone are able,* to form a just decision on the competency of the pupil, and who, malice could not by possibility aver, had any interested purpose to effect.

So far as the dignity of our profession is connected with the system of instruction pursued at the college, (and intimately connected it is with that system; for we want a succession of young and zealous fellow-labourers to vindicate our claim to respectability, and still to uphold that claim when we are low in the grave) these are our deliberate opinions. These are the

objects which we will honestly, steadfastly pursue: nor will we cease from our labours until we have attained them, or the greater part of them. We have stated them thus at length, and perhaps tediously so, that we may not hereafter be misunderstood by our readers, or by any party.

By what means shall we attain this consummation devoutly to be wished? By fair but close, by strong but legitimate argument. By that which will ultimately convince the understanding, but not rankle too deeply in the heart.

The veterinary surgeon, we have said, is by profession a gentleman. It will be his own fault if he is not received as such by those with whom he associates. The cause of such men cannot be benefited by dishonourable means.

The utmost freedom of discussion we eagerly invite; but no attack on private character, no imputation of unworthy motives, until they become too apparent to be denied, no foul misrepresentation, no vile system of ungentlemanlike and blackguard annoyance, shall disgrace the pages of "The Veterinarian."

There are those who have the power to assist us in accomplishing our great object, and we do not wish to excite in them the will to thwart us. There are those on whom dispassionate argument may prevail, but who would do nothing on compulsion. We all have, or ought to have, the same cause at heart; *and we would unite all in the zealous pursuit of it.*

If, possibly, they who have long had every thing their own way may have suffered some abuses to creep in, (and we all need an occasional hint to keep us to our duty,) others have been as culpable in suffering these abuses to be established and to grow.

A watchman is now at his post, self-constituted certainly, but who will so conduct himself that you shall not wish to displace him. He will occasionally whisper in the ears of the slumberers, whether high or low, that it is time to awake. If a whisper will not suffice, he will speak a little louder; and if

the sluggard does not then arouse, he will take him by the shoulders and give him a hearty shake. If he does this with good-humour on his countenance, and sincerity in his heart, none can be justly offended ; or, if they will—they must.

These are important objects ; but there are others, we had almost said, even more important. There has hitherto been no mode of communication between veterinary surgeons. Each, honestly devoted to his profession, has either obtained a clearer insight into the nature of some disease, or has adopted a new and more successful mode of treatment, or has made a valuable addition to our sadly limited college pharmacopœia. This increase of knowledge would be confined to his own bosom, and would be buried with him. Even our best veterinary publications contain only the opinions of the writers, or of their little circle of friends.

A periodical work opens that mode of communication so much to be desired ; and enables us, by the accumulation of new facts and discoveries, each perhaps little important in itself, but, in the aggregate, unspeakably valuable, to predict a more extended and rapid improvement than the veterinary art has yet known. We earnestly call on every veterinary surgeon to assist us here. Each has records of singular cases, or peculiarities of practice, which ought not to perish in oblivion.

Yes ! we will say that this is the *most* important object of "The Veterinarian." Angry discussion will rarely do good, and will often injure the best cause. On the patient accumulation of experiment and fact must our ultimate improvement be founded. We cordially entreat the co-operation of our brethren so long as we are deemed worthy of it ; and every communication shall receive due and grateful consideration. Our cause is theirs ; and without their support our literary existence must speedily terminate.

Extracts from Journals, Foreign and Domestic.

ON NEUROTOMY.

WE are naturally anxious to know the opinions of our neighbours on the few improvements in the veterinary art which we can justly call our own. M. Berger, (in the February Number of the "Journal Pratique,") has spoken of the navicular disease, and the operation of neurotomy: the true theory of the former discovered by Mr. Turner; the latter, revived and improved, and established by Mr. Sewell. Professor Dupuy has made some valuable remarks on this paper, and it will not, perhaps, be displeasing to our readers to possess the substance of the original and the commentary.

M. Berger tells us that those lamenesses in the fore feet, the situation and the cause of which often escape the most diligent research, and which for the most part resist all the means that have been tried in France for their removal, are now frequently cured by the English veterinarians, by a section of the plantar nerve.

Mr. J. Turner, of Croyden, had proved by numerous dissections of the horse's foot, that in more than three cases out of four, where lameness of the anterior extremities occurred without apparent cause, it resulted from a lesion of some of the sensible parts contained within the hoof, and more particularly at the articulation of the two last phalanges over the navicular bone, or where the flexor tendon plays over the surface of this bone.

Although this disease had been previously noticed by Lafosse and others, it had not sufficiently attracted the notice of the profession until Mr. Turner developed its situation, nature, and cause. This species of lameness he thinks first suggested to Mr. Sewell the practice of neurotomy, and not merely the division of the nerve, but the excision of a portion of it, and which has been attended by the happiest results.

The knowledge of this important operation soon reached the French schools. In 1807, Heimann, a horse-dealer, practised it

on several of his own stud; but in almost every case the hoof shortly separated from the foot. Herver, a farrier in Paris, likewise attempted it in the same year, but with no better success. The subjects to be operated on were unskilfully selected by each.

From this time neurotomy, although occasionally resorted to, was not received into the list of acknowledged veterinary operations, and M. Berger may be considered as having first brought it fairly before the French public *.

M. Berger was in London in July, 1826, and having been introduced to Mr. Sewell by Dr. Crawford, the assistant-professor operated on several horses in his presence.

M. Berger was so pleased with what he saw that he determined, on his return to France, to attempt neurotomy, on as large a scale as opportunity would permit. His paper contains the result.

He previously, however, communicates a very singular piece of intelligence, that there is a veterinarian in London, who has acquired great reputation from his skilful and successful *firing* in cases of ring-bone. He almost invariably removes the lameness. The secret of the affair is, that unauthorized by, and unknown to the proprietor of the horse, he excises a portion of the nerve, and conceals the incisions by the application of the cautery and by the use of coloured ointments.

We should not object to neurotomy for ring-bone where actual anchylosis had not taken place, but we detest this mystery and trickery; and if the thing be true, and any correspondent will furnish us with the name of this worthy member of our pro-

* Neurotomy was in a few instances tried, as a curious experiment, in the Colleges of Alfort and Lyons, but it was never publicly recommended by any of the professors. Mention of it occurs but once, and that indirectly, in the whole course of the French journals, when M. Huzard, Junr. is reviewing Mr. Blaine's "Veterinary Outlines," and, although he cannot deny that it may be occasionally useful, his praise is cold and guarded. He cannot comprehend why nature should have distributed the nerves to certain parts if the excision or removal of them could be effected with impunity. He imagines that the nerves are concerned in the function of nutrition, and that by their excision the proper nourishment of the part must be cut off, (strange that the professor of a veterinary college should have so confounded the functions of the ganglionic and spino-cerebral nerves!) and he cannot forget that when he witnessed the performance of neurotomy at the English college, the horse got up much lamer than before the operation. (Journal de Méd. Vét. Maï, 1826.) Hurtrel D'Arboval, in his voluminous and scientific "Dictionnaire de Médicine et de Chirugie Vétérinaire," makes not the slightest allusion to the operation. Ed.

fession, we shall be very much disposed to shew him up in proper colours.

M. Berger relates several cases of navicular disease in which all means failed to remove the lameness. He then gives us a very candid account of his own experiments. A mare had been lame nearly twelve months, and the mode of treatment recommended by the most skilful practitioners could only afford a temporary palliation of the lameness. A portion of the nerve was excised, March 28, 1827. Six weeks afterwards she appeared to be perfectly sound; but being sent to Paris to be reviewed she fell lame on the same leg. Much enlargement appeared round the coronet, and the hoof seemed to be separating from the foot. By the use of proper means all this disappeared, and at the end of June she was again sound, and remains so.

Another horse had been lame two months. The operation was performed on the outside of the leg on the 11th of April. There was much previous engorgement. The incision was necessarily deep, and considerable inflammation and tumefaction succeeded. On the 25th the operation was performed on the inside of the leg, and the lameness was perfectly removed.

A third horse had a portion of the nerve excised on the outside, and, two months afterwards, he was as lame as ever. The nerve on the outside of the leg was then divided, and the animal became sound.

M. Berger was therefore satisfied as to the efficacy of the operation; but, as the first horse, who had undergone the full operation at once, became lame in two months, although that lameness soon disappeared, he is disposed to attribute this to the division of both the nerves at the same time. We confess that we altogether differ from him, and ascribe it to the long journey undertaken before the inflammation was quite subdued.

M. Berger candidly acknowledges that, from so few facts, he is not justified in forming a decided opinion, but he tells us, what we knew not before, that many English veterinarians prefer this divided operation. If it be so, we are not of their number; but should regard it as an unnecessary waste of time, an increase of expense to the proprietor, and a protraction of suffering to the patient. We rather suspect that the same friend who informed him of the ring-bone-firer, has here likewise misled him. However this may be, we are much indebted to M. Berger for directing the attention of the French veterinarians to this valuable operation, and if he should succeed in introducing and establishing it, he will render an essential service

to the profession and his country, and we will permit him to perform it in his own way.

M. Dupuy, after inflicting a little deserved chastisement on our celebrated veterinarian, Mr. Clater, and his disciples, acknowledges that the subject on which M. Berger treats is a very important one, and has been too long and too much neglected. He approaches it however with caution, and demands that a novelty shall not be hastily adopted, without the strictest examination into the theory on which it rests, and the most decisive experience of its beneficial result. He then gives an admirable account of the anatomy of the foot, and the causes which render the fore feet so much more susceptible of lameness than the hind ones. We regret that an unusual pressure of matter will not permit us to extract it.

When there is no mechanical derangement of the foot, no great inflammation, no abscess, he can see no objection to the adoption of this method of relieving pain, and removing that lameness which depends on the existence of that pain.

He then considers the objections to neurotomy, most of them now exploded among us, but which were once strongly advocated, and which we can imagine to have considerable weight where the operation is imperfectly understood, and its beneficial consequences not actually experienced.

Some, he tells us, have feared that the foot would be rendered perfectly insensible, and that it would necessarily become an inert and useless body. He replies, that the nerves which supply the foot were not nerves of motion, but of feeling alone. The nerves of motion terminate far above the place of incision. How then, he asks, can paralysis be produced?

The circulation will not be suspended, for many reasons. The parietes of the arteries receive fibres from the ganglionic system of nerves; and, even if the nervous energy were suspended, the circulation would be kept up by the impulse of the heart and the elasticity of the arteries.

He acknowledges that experience is decisive on the subject. Many horses, on whom all other methods had been tried in vain, have been rendered serviceable for several years. The means which failed were complicated and expensive. This is simple and economical, and directly attacks the source of pain and the cause of disease.

He thus concludes; that they, who, influenced by caprice or prejudice, would reject it without examination, are utterly inexcusable; and would induce him to say, that that part of veterinary medicine which concerns the foot is not yet emancipated from the tyranny of superstition; and that it cannot soon become a science, or even an art, because it is destitute of principles and inaccessible to reason.

WORM IN THE URETHRA OF A DOG.

M. SEON, Veterinary Surgeon to the Lancers of the Body Guard, was requested to examine a dog straining in vain to urine, often uttering dreadful cries, and then eagerly licking the penis. After having tried in vain to abate the irritation, he denuded the penis for the purpose of endeavouring to pass an elastic bougie, when he perceived a conical body half an inch long protruding from the urethra, with each effort of the dog to avoid his urine, and immediately afterwards returning into the urethra. He seized it with a pair of forceps, and drew out a worm much resembling the strongylus, and $4\frac{1}{2}$ inches long. It was living and its movements were very active. A domestic, who held the dog, was frightened by the contortions of the worm, so that M. Seon could not ascertain its species. He only saw that its intestines were filled with a white fluid. The worm being extracted, the urine flowed, and the dog soon recovered. —*Journ. Pratique, Fev.* 1828.

REMEDY FOR GLANDERS.

M. BALLESTRA, Veterinary Surgeon of Turin, is convinced by numerous experiments of the good effect of the strong mercurial ointment in the cure of glanders. He shaves off the hair from the inside of the arm and thigh, and having bathed the parts well with warm water, he rubs in an ounce of mercurial

ointment, and he repeats this daily until he has consumed five or six pounds of the unguent.—*Journ. Pratique, Fev.* 1828.

Miscellanea.

METHOD OF PROTECTING TURNIP-CROPS FROM THE FLY.

By Mr. Charles Poppy, Junr. *of Witnesham, Suffolk.*

THE turnip-fly is an insect of the genus coleoptera. There are two varieties, the crysomela oleracea, whose shells are blue tinged with green, and the crysomela nemorum, with black and yellow stripes. They are found in the banks of hedges from an early period of the spring until late in the autumn, and thence they migrate to any crops grateful to them, and particularly to young turnips before they get into the rough leaf. To this plant they are sadly destructive, and sometimes devour almost the whole crop.

It had long been observed, that where the plants were most crowded, and consequently more tender and succulent than the rest, the fly was most numerous. This suggested the idea of sowing several of these batches by way of decoy to the insects, which were then destroyed by a heavy roller. The result was doubtful.

Other agriculturists sowed their land unusually thick, that there might be plants enough to supply the insects, and also to stand for a crop. The success was more considerable, but the turnips were generally small in size, and consequently less valuable.

Mr. Poppy has avoided this, and likewise prevented the ravages of the fly. He drills the seed in rows at only half the usual distance, and sows each alternate row thick with the white turnip as a decoy for the fly; the other row is sown thin with the Swedish turnip and intended for the crop. In the thick-sown rows the plants (in agricultural language) draw each other up, and are tender and succulent, and attract the fly, which confines itself almost entirely to them. When the turnips intended for the crop are ready for the first hoeing, the other rows are turned in with the horse-hoe. By this means he obtains excellent crops, when those around him utterly fail.

ON MEDICINAL EXTRACTS.

Extracted from the Transactions of the Society of Arts.
Vol. XLV. p. 71.

IT is well known to professional men, that the juices of almost all plants are more or less injured in their medicinal qualities by being boiled down, and evaporated in the usual way to the consistence of extract.

At Apothecaries' Hall the evaporation is entirely effected by means of steam, so that the heat employed is under complete control; and in Mr. Barry's patent process the evaporation is performed in vacuo.

The process of Mr. Houlston (to whom the thanks of the society were voted) is the following:—The plant being bruised is to be submitted to the action of a press in order to squeeze out the juice, which is then to be pressed through fine linen. The depurated juice is now to be poured to the depth of about one-eighth of an inch into an earthenware plate, or a glass dish, and is to be placed in a constant current of air, by placing it on the inner side of a window, and raising the sash about an inch. The constant current of air thus produced occasions the rapid evaporation of the watery parts, and there remains a soft extract, retaining the colour, odour, and medical properties of the recent plant, with less alteration than by any other method. If the sun shines a blind should be hung before the window, as vegetable juices are speedily changed by the action of solar light. The consistence given to the extract is entirely optional; but those that are rather hard will keep better than those that are soft.

This method is not adapted to a manufactory on a large scale; but any individual practitioner may, without much trouble or expense, prepare in this way, for his own use, extracts far superior, in active properties, to those that are usually met with.

Cases or Communications, addressed to the *Editor of the Veterinarian*, at the *Printer's*, (post paid) will meet with due consideration.

John Hill, Printer, Black Horse Court, Fleet Street.

THE

VETERINARIAN.

VOL. I. JUNE, 1828. No. 6.

ANATOMY OF THE HORSE.

(Continued from page 152.)

SPHENOID BONE. (OS SPHENOIDES.)

SITUATION. Inferior and middle parts of the cranium.

Form. It bears a striking resemblance to a bird in flight, with its wings and legs extended: a comparison that has given rise to its

Division—into body, alæ or wings, and pterygoid processes or legs: altogether presenting for consideration two surfaces and two borders.

The Inferior Surface, irregularly convex, is distinguishable into three parts:—a middle and two lateral portions. The middle, thick, prominent, cylindroid, and oblong from before backwards, by its union with the basilar portion of the occipital bone and the body of the ethmoid, forms the base of the cranium: its porousness denotes muscular attachment. Between the middle and lateral parts, on either side, runs a narrow fissure denominated the pterygoid, which leads into two small canals, one entering the cavity of the nose, the other the orbital hiatus: the fissure affords a passage to the pterygoid branch of the portio dura.—The lateral divisions send forth by the sides of the fissures the pterygoid processes, which project downwards and forwards, form a union with the palate bones, and afford attachment to the internal pterygoid muscles. At the bases of these processes are the pterygoid foramina; above and internally to the base is the orbital hiatus, a considerable aperture, obliquely ovoid from above downwards, opening into the back of the orbit, and including the supero-posterior and infero-posterior orbital foramina: the former transmitting the opthalmic nerve and artery, and the third pair of nerves; the latter, the superior

maxillary nerve. Immediately over the hiatus is the opening of the canal which conducts the pathetic nerve into the orbit: it is in part formed by the ethmoid bone.

The Superior or Cerebral Surface is unevenly concave, being impressed by the middle lobes of the cerebrum, which it supports. It presents three general concavities:—a middle and two lateral. In the centre of the middle division is the pituatury fossa for lodging the gland from which it takes its name; it is bounded on the sides by the optic fossæ, which are occupied, inwardly, by the optic nerves, outwardly, by the cavernous sinuses. Farther removed outward and forward is the foramen lacerum orbitale, and immediately over it the spinal foramen, through which passes the pathetic nerve before it enters its canal.

Borders. *The Posterior or Occipital* consists of an oval solid part in the middle, which is united with the basilar process of the occipital bone, and, laterally, of two wide irregular notches contributing to the formation of the foramina lacera basis cranii. —*The Anterior or Palatine Border* has a similar oval middle, joined to the ethmoid bone; and has a connection also with the vomer.—Each *Lateral Border* is distinguishable into two parts: —a posterior, which is scaly and denticulated for adaptation to the squamous temporal bone; and an anterior or orbital portion, projected forward to unite with the anterior extremity of the same bone, and also with the ethmoid, while it forms the posteriormost part of the orbit.

Connection—With the occipital, ethmoid, and squamous temporal bones; also with the palate bones and vomer.

ETHMOID BONE. (OS ETHMOIDES.)

Situation. Antero-inferior part of the cranium; immediately before the sphenoid bone; where it constitutes the partition between the cranial and nasal cavities.

Form. One portion, the posterior, bears a resemblance to a bird with its wings extended, as in the act of flight, having no legs, but a long erected neck and a small round head; the anterior part consists of a thin, brittle, porous, spongy structure, of considerable volume.

Division—Into a middle and two lateral parts.

The Middle Portion is large in bulk, consisting of a body behind, and of two voluminous spheroid spongy masses in front parted by a septum. The body is oblong from before backwards, concave superiorly, convex inferiorly, and interiorly formed into two concavities, the ethmoidal sinuses; these are

divided by a broad perpendicular plate, which extends upwards to unite with the nasal spine; (the partition between the frontal sinuses;) below, it is received into the groove of the vomer; while in front it sustains the cartilaginous septum of the nose, the septum nasi; altogether completing the division of the nasal cavity into two chambers: the ethmoidal plate itself is composed of two thin laminæ which in old subjects become consolidated into one. Posteriorly, on either side, the body presents the optic hiatus, transversely oval, leading to the optic foramen: the posterior surface is oval to form a junction with the sphenoid bone. Arising from the upper and fore part of the body is a pyramidal eminence somewhat curved, called the crista galli: it sustains in front the perpendicular plate, the falciform process of the dura mater behind, while from its sides extend the cribriform plates—two ovoid, thin, brittle lamellæ, which are received between the frontal orbital plates and the floors of the frontal sinuses, pierced by numerous small holes for the transmission of the filaments of the olfactory nerves, and whose concave cerebral surfaces are denominated the ethmoidal fossæ and are occupied by the olfactory sinuses. To the outer side of either fossa opens the internal orbital foramen, from which a fissure runs upward to the part of the cribriform plate connected with the principal cornu among the ethmoidal cells.—THE ETHMOIDAL CELLS, the voluminous structure protruding from the front of the cribriform plates, consists of a great many thin, brittle, porous osseous plates, curved or rather convoluted so as to form numerous narrow, elongated, cornuform sinuses, rendered separate and distinct from one another by intervening longitudinal grooves, with which from above they all in common have communication. These canals proceed, converging a little as they advance, to terminate underneath the superior turbinated bone, at the back of the nasal fossa, within a space communicating with the middle meatus. The anteriormost cornu or cell is conspicuously long and capacious: the rest increase in dimensions according to their proximity to this large one. Issuing from the front of the cells is a broad, thin, funnel-like process, which unites with the superior turbinated bone and forms a sharp prominent crest, serving as an imperfect septum between the frontal and maxillary sinuses.

The Lateral Portions, alæ or wings, display more convexity than concavity superiorly, the reverse inferiorly: they originate from the supero-lateral parts of the body; consist of thin, flexible plates; spread outward and upward, contributing to the posterior and inward parts of the orbits; and terminate in semicircular borders, sloped off behind, which, posteriorly, lie upon

the wings of the sphenoid; laterally, are embraced by the bifid orbital plates of the frontal bone, and, in fine, received into the mortise of the same. Upon their internal surfaces the alæ support the anterior lobes of the cerebrum: their opposite surfaces constitute within the orbits the ossa plana.

Connection. With the sphenoid and frontal, the vomer and superior turbinated bones; and with the cartilaginous septum of the nose.

II.—THE FACE.

The face constitutes the antero-superior, anterior, and inferior parts of the head, making altogether (including the inferior maxilla) about four-fifths of the whole: it is the part to which the head owes its prolongation anteriorly, and principally its lateral breadth. It is bounded, behind, by the cranium; at the sides, by the zygomatic and orbital arches; infero-posteriorly, by the ethmoid and sphenoid bones, and the basilar process of the occipital. It is composed of two perfectly distinct and separable parts; *viz.* the superior maxilla or syncranium; and the inferior maxilla or diacranium: the latter consists of a single or indivisible piece, called the lower jaw; the former or upper jaw is constituted of seventeen pieces, but which are closely and immovably united; *viz.* the nasal bones, the superior and anterior maxillary, the malar, the lachrymal, the palatine, the superior and inferior turbinated, and the vomer: the teeth are equally distributed between the jaws. First, of the superior maxilla.

NASAL BONES. (OSSA NASI.)

Situation. Superior part of the face; where they constitute the roof of the cavity of the nose.

Figure—Vaulted, thin, elongated; mostly convex externally, concave internally; broad posteriorly, tapering and terminating in a sharp point anteriorly: the single bone represents the section (about one-third) of a hollow cone, split longitudinally; the two bones together form the outline of a heart as painted on cards.

Division—Into two surfaces, two borders, a base and an apex.

Surfaces. *The External* is not merely smooth; it is polished. It is not everywhere uniformly convex: indeed, the sides are towards their middle slightly concave; and the outward side is most depressed.—*The Internal Surface* is concave, that it may enlarge the area of the cavity of the nose: the channel it forms is the nasal fossa, the posterior and inferior parts of which are

occupied by the superior turbinated bone; the unoccupied part constituting the upper nasal meatus. Posteriorly, between the two bones a sinus is formed, which, though sometimes called the nasal, proves to be nothing more than the anterior chamber of the frontal, the two uniting into one cavity.

Borders. *The Superior* is straight; but its edge is turned inward, forming a sort of internal crest, which along with its fellow is embraced by the superior border of the cartilaginous septum of the nose. Along their superior borders the two nasal bones are united—in the young subject by a sort of mortise-connection; in the adult, by a suture half denticulated and half plain or smooth-edged.—*The Inferior Border* is waving, and is denticulated and mortised in its articulation with the superior and anterior maxillary bones; it is united also by denticulation with the lachrymal.

The Base has its border broadly sloped off and denticulated, and is united with the frontal bone, lying upon its anterior border.

The Apices of the two bones form together the nasal peak; a perfectly insulated or unconnected and remarkable projection, which gives support to the nostrils and has attached to it the dilatator narium anterior.

Connection. With the frontal, superior and anterior maxillary, and lachrymal bones: the two together maintain, superiorly, in its place, the septum nasi.

SUPERIOR MAXILLARY BONES. (OSSA MAXILLARIA SUPERIORA.)

Situation. Supero-lateral parts of the face.

Figure—Trilateral: thick in the middle; posterior part, gibbous; anterior, thin, tapering and laminous.

Division—Into three surfaces, two extremities, and three borders.

The External or Facial Surface is partially subdivided into antero-superior and postero-inferior portions by a protuberant ridge named the superior maxillary spine, which forms one continuous line with the zygomatic spine and ends abruptly opposite to the third molar tooth: the upper subdivision is much the larger and affords attachment to the masseter. Rather above the middle of the upper surface opens the infra-orbital foramen, traversed by bloodvessels and nerves bearing the same name.

The Inferior or Palatine Surface exhibits the concave side of a vaulted, demi-arched, oblong plate, called the palatine process

or bony palate, which forms the partition between the cavities of the nose and mouth: posteriorly, this plate denticulates with the palate bone; anteriorly, with the anterior maxillary bone. The surface is bounded along the outer side by the alveolar processes, and between it and them runs a groove for the conduit of the palatine artery.

The Superior or Nasal Surface forms the outer side and half of the floor of the nasal cavity. Like the inferior surface it is concave, but unevenly so, being more excavated towards the posterior than the anterior part: in fact, the broad channel formed by both bones constitutes three-fourths of the bony parietes of the nasal cavity. To a longitudinal spine running along either side of this channel is attached the inferior turbinated bone, dividing it laterally into two canals named the inferior and middle meatus. At the supero-posterior part of the nasal chamber, behind the superior turbinated bone, the maxillary sinus opens through an oval aperture into the middle meatus: within the meatus itself, anteriorly to this, arched over by a little transverse eminence, is the orifice of the lachrymal conduit, which is traversed by the lachrymal duct.

Extremities. *The Posterior* swells into a large rounded protuberance, the maxillary tuberosity; between which and the palate bone is a hiatus presenting three apertures: one is the posterior palatine foramen; another, the anterior palatine foramen and conduit leading to the palato-maxillary canal; the third is that of the infra-orbital canal, leading to the foramen of the same name. To the outer side of the tuberosity is the malar process, articulating with the malar and lachrymal bones and the zygomatic process of the temporal.—*The Anterior or Dental Extremity* is pyramidal and laminous, and contains an incurvated, conoid, alveolar cavity for the lodgement of the tusk: it denticulates with the anterior maxillary bone.

Borders. *The Superior or Nasal* is laminous to be united to the nasal bone; and has a mortise in its fore part to receive the border of the anterior maxillary bone.—*The Inferior or Alveolar Border* presents two parallel plates divided by transverse septa into six quadrangular cavities, the alveoli, for the implantation of the molar teeth. Behind the last molar tooth is the alveolar tuberosity, a rugged eminence giving attachment to the pterygoideus internus.—*The Internal or Palatine Border* denticulates with its fellow.

Connection. With the squamous temporal and nasal bones; and with the anterior maxillary, malar, lachrymal, palate and inferior turbinated bones.

Communications and Cases.

"I have not willingly, wittingly, or wilfully shut the door against any worthy person, nor shall my prejudice (the porter in this kind) exclude any out of my book, who bring merit for their admission."—*Fuller's Worthies.*

TRAUMATIC TETANUS.

IN the month of October, 1827, a tall bay horse, 7 years old, belonging to the Enniskillen Dragoons, was successfully treated by me for lameness of the near fore foot, which appeared to consist in chronic inflammation of the laminæ.

On the 5th of November following, the animal having been then two or three weeks at his duty, as the dragoon whose horse he was, was leading him from the riding-school to the stable, he made a sudden gambol and broke away, rushing down a little descent into the stable-yard with such violence and heedlessness that he precipitated himself upon his head, and bruised and cut both knees severely. I saw him the day afterwards, found the skin lacerated and divided transversely for the space of two inches in extent, in both knees, exposing to view two gaping wounds, the annular ligament much discoloured and abraded, but nowhere penetrated, and the surface yielding a bloody serous issue: by fomentations, poultices, cooling lotions, and purges, the consequent inflammation was kept down, and the animal, after an interval of three weeks, again restored to soundness and on the eve of returning to duty, when—

On making my visit, as usual, on the 4th of December, a period at which the wound was considered sufficiently healed for duty, (although a small place in the middle was still bare of cuticle,) the farrier-major accosted me by saying, "You are come very opportunely, Sir; the broken-kneed horse, I am apprehensive, has got locked jaw: I have but this moment been called by the man to come and look at him." This was about four o'clock p. m. The stable being dark, I ordered the man to lead his horse out. The instant he approached the door, his dreadful condition became too manifest to admit of a doubt, although the disease could only be said to be then beginning. His neck was stiffened; his head was raised and protruded; his eye bore the peculiarly ghastly aspect it assumes in tetanus,

and when irritated was retracted and shielded by the haw; he moved slowly, stifly, and with difficulty; his tail was erected in a straight line with the back, but without vacillation; pulse 55, small and at times indistinct; respiration not perceptibly affected. The jaws partook of the spasm; but they yet preserved motion sufficient to admit of a ball being administered. I directed that he should be removed into a box, lose six quarts of blood, take two ounces of purging mass, be warmly clothed, and have his legs bandaged with flannel.

6th. I visited him again. He appears in all respects much the same as on the evening of the attack. His appetite has been better than could be expected; and he continues to have limited use of his jaws. He has not yet purged; but his last evacuation is soft and *en masse*. Oatmeal gruel is made for him, of which he drinks frequently, swallowing however but little at a time. Two drams of opium to be administered in ball to him morning and evening; to begin to-morrow morning; and the whole spine, from head to tail, to be shorn and afterwards blistered with strong ointment of cantharides.

8th. He appears no worse. The purgative medicine has freely operated, and he is taking the opium morning and evening: the balls being made small and given with the aid of a stick. The blister has taken good effect, particularly upon the neck. He eats both corn and hay, and drinks his gruel.

10th. I saw him about four o'clock, p. m. The farrier-major and dragoon were in the box along with the horse. The former told me that he had just finished bleeding him again, to six quarts, in consequence of his appearing about an hour before to have become suddenly worse. (I was sorry to hear this; because I had determined in my own mind to abstain from further venesection: however, I had not expressed any such opinion to the farrier, and therefore he had acted—very properly—according to his own judgment.) He reported to me that the respiration and pulse had suddenly "got up," and that the horse appeared to have "turned altogether worse." I now for the first time perceived his breathing to be quickened, and that there was heaving of the flanks, though by no means violent or laborious. The pulse also had risen to 65; but, all this, had it not been for the report of the farrier-major, in which I place great faith, I should have attributed to the loss of blood. He had had no evacuation since the day before; in consequence of which he was ordered to take more aloes combined with calomel; to have injections; to continue the opium twice a day; and to have the blister repeated to the spine.

12th. Bowels freely opened. Respiration tranquil—pulse 45,

but small, and has still a chord-like feel. In other respects much the same. His appetite holds better than one might expect.

15th. The farrier reported that he had continued without any unfavourable change until yesterday afternoon, when he experienced a very sudden and alarming attack resembling the symptoms of gripes, in which paroxysm he breathed so violently, sweated so profusely, and appeared altogether in such extreme agony that the man thought it would have terminated in his death: purgation however fortunately came on during the struggle, shortly after which the symptoms of pain subsided, and to-day I find all is again restored to tranquillity. The farrier ascribes this attack to constipated bowels, which had continued unrelieved for two days notwithstanding he had given (according to my direction) an ounce of aloes daily, and at intervals administered copious injections. The opium has never been discontinued. Keep the bowels open; and repeat the blister to the spine.

17th. In all respects improved. The jaws admit of wider distraction with the hand; he moves with less rigidity and irksomeness; his appetite is better; the pulse fuller and softer, though undiminished in frequency; the eye less irritable, the haw less protruded. Continue the opium and injections.

20th. Progressively recovering.

24th. So much better that I deemed it unnecessary to continue the opium: he has taken altogether ten ounces of the solid gum.

27th. He now eats his full ration of provender; has been led out for ten minutes to-day; moves with more facility and freedom than might have been expected.

Jan. 3, 1828. Naturally spirited and playful when in health he showed some gambols during his exercise to-day. His jaws also appear to have almost regained their liberty; for he eats both hay and corn without any pain and with but trifling inconvenience.

From this time he continued so rapidly to mend that in the seventh week from his tetanic attack he once more returned to his duty.

No member of the profession, I should imagine, is unacquainted with Mr. Wilkinson's work on Tetanus: this is a case which may be regarded as giving additional interest to that gentleman's observations.

WILLIAM PERCIVALL.

OBSERVATIONS ON THE FILARIA OR THREAD WORM,

FOUND IN THE EYES OF HORSES IN INDIA.

By W. Twining, Esq.

(Continued from page 119)

SINCE the preceding remarks on Filaria Equi were read before the Society, I have been favoured with a communication from Mr. Gibb, Surgeon to the Honourable Company's stud at Poosah, to whose liberality and kindness I am indebted for answers to some queries, as well as further information in a letter, the substance of which I am glad to annex: it is evidently the result of careful observation, under circumstances the most favourable, and in a field for experience, of an extent, I apprehend, much beyond what can have fallen to the lot of any other person. Mr. Gibb's communication is made without reference to the foregoing paper, which he has not seen. The difference which appears as the result of the anatomical researches of Mr. Gibb, from those of Dr. Hardtman, induce me to believe that there are different species of worms, which infest the bodies of horses in different districts in India. The quotation already given from Linnæus coincides with Dr. Hardtman's observations, as to the worm being found in the cellular tissue. Without farther inquiry, it would perhaps be premature to conclude, that different kinds of worms are endemic at the stud stations of Poosah and Haupper, Filaria prevailing during the cold season at one station, and Strongylus at the other. Both these worms are thread-like, and without the aid of a microscope might not be discriminated. One is described by naturalists as inhabiting the alimentary canal only; the other as being found in the cellular structure and various cavities.

Mr. Gibb says: "I have never found the Filaria Equi, except in the stomach and intestines of the horse, and in the eye. I have generally found them in great numbers in the stomach and intestines, whenever I have had occasion to open horses, though more numerous I think in the cold months than during the hot weather or rains.

"The fact I allude to in my answer to the Sixth Query, is this, that the phenomenon of the worm in the eye is exclusively confined to the cold months. I have never, as far as my recollection serves me, seen a case of worm in the eye before the beginning of October, or later than the end of February or com-

mencement of March. This is a fact which I have for a length of time noticed and recorded, and which has inclined me to consider the appearances of the worm in the eye as connected with a particular season of the year.

"I have generally observed, that the heavier the rains have been during the periodical rainy season, and particularly towards their close, the more numerous have cases of worm in the eye been during the subsequent cold season. In such seasons in Tirhoot, the fogs are always more heavy and frequent than when the rainy season has been moderate.

"At the commencement of the present cold season, the fogs in Tirhoot were very frequent and heavy, and more cases of worm in the eye have occurred this season than for several years past. The rains were unusually heavy last year, and continued to a later period than common: the whole country in that district was inundated by the rains. The country is low, and there are dispersed through the district a great many *jeels* or low spots containing water during the whole year. I conceive that it is chiefly owing to the low situation and damp climate of Tirhoot, that the worm in the eye, and the disease called *Kumree,* or weakness of the loins, are so prevalent.

"In this district, (Ghazepore,) which is considerably higher, we have much less of those diseases than in Tirhoot; and in the upper provinces they are still less known, particularly where the climate and soil are drier. Wherever the situation is low and damp, and the easterly wind prevails, more of Kumree and worm in the eye will be found; and *vice versa.* If the worm in the eye depended on any quality of the food or water, I think it might be seen throughout the year, instead of being confined to a certain period.

"I have always been disposed to think, that the worm in the eye must find its way into that situation through the circulating system, and not from without.

"The same causes which produce the worm in the eye, appear to me to induce the weakness in the loins. Both are found to prevail in similar situations; but with this difference, that the weakness in the loins may, and does take place at all seasons of the year. It, however, most commonly takes place in the cold months, particularly in October and November, though I have seen cases occur every month of the year, when the cattle were in the highest possible health previous to their being affected with the Kumree. The attack of the disease is almost always sudden, and without any previous indisposition.

"I have more than once seen two worms in the same eye at one time; and have also seen a second worm make its appear-

ance in an eye from which one had been extracted some months before. The worm is always found in the anterior chamber of the eye, swimming in the aqueous humour."

For the sake of precision on those points, concerning which I was most anxious to obtain information, I proposed some queries: the following are Mr. Gibb's answers.

1*st*. Have you often had occasion to see horses affected with the disease produced by the worm in the eye?

"I have often had occasion to see the disease, and had opportunities of witnessing more cases of it than any other person in India, I imagine, from my situation at the stud for the last twenty-two years. While at Poosah, where I was stationed sixteen years, I think I must have seen, on an average, nearly twenty cases annually."

2*nd*. What has been the usual result of the disease, if no operation were performed?

"The usual result has been complete opacity of the transparent cornea, and subsequent loss of sight of the eye. In some instances, where the worm was weakly, and its motions sluggish and feeble, opacity of the cornea did not take place. The worm soon died, was absorbed, and the eye remained clear. In such cases I made it a practice never to operate."

3*rd*. Has weakness of loins, or other symptom of cachexia, often attended this disease?

"Weakness of the loins occasionally occurred, in horses that had been affected with the worm in the eye; but by no means invariably so, or to such a degree as to induce me to conclude that the former was occasioned by the latter, or inseparably connected with it. I have never observed any other symptoms of cachexia attending the disease."

4*th*. Have you ever found worms similar to those that occasionally exist in the eye, in the intestines of the horse, or in the cellular tissue of any part of the body, or in the canal of the spine, in contact with the spinal marrow?

"I have almost invariably found, in the stomach and intestines of the horse, worms exactly similar to those that are found in the eye, and in very great numbers, particularly in the cold months. I have found them also in tumors of the stomach, imbedded in a thick mucus; but never in other parts of the body, never in the cellular membrane of any part, or in the canal of the spine: though I have often dissected, with Mr. Moorcroft, horses that have been *Kummree*, or weak in the loins, with the view of ascertaining the cause of the disease. Our researches were naturally directed to the spine, and more particularly to that portion within the lumbar vertebræ."

5th. Have you ever found similar worms in the bloodvessels, or in the blood when it has been drawn?

"I have never found worms similar, either in the bloodvessels or the blood when drawn. Worms of a different character are sometimes found in the cœliac artery of the horse, both at home and in this country; and Mr. Moorcroft informed me they were often found at home (in Europe) in this situation. They are larger, thicker, and more opaque than the worm of the eye."

6th. Do you know of any particular situations where the disease prevails more than in others; and have you reason to suppose that any particular description of food or water may be productive of the disease?

"I know from experience that the disease does prevail more at particular situations than at others: at Poosah, in the district of Tirhoot, the disease is much more frequent than up in this part of the country. At Poosah, there have been upwards of thirty cases of worm in the eye among the young stock during the present cold season; while up here at the depôt, there has not been a single case within the same period. I am not disposed to think, nor have I seen any cause to believe, that any particular description of food or water is productive of the disease. It appears to me to depend on climate and situation more than on any other circumstance, and to have a connection with particular seasons of the year, as I shall mention in my letter."

7th. When the worm exists in the eye, what is the best mode of extraction, and do you know if a cure can be performed by medicines?

"The best mode of extracting the worm is by puncturing the eye with a common bleeding lancet, the incision being made on one side, so that the small speck which generally attends the puncturing of the cornea, may not interfere with vision, or as little as possible. In operating for the extraction of the worm, I never throw the horse, or use any means of fixing the eye. With my left hand I raise the upper eyelid, and make an assistant depress the lower; I then watch for an opportunity to puncture the cornea, behind, and about a line's breadth, or a a little more, from its junction with the sclerotic coat. At the time the puncture is made, I press the ball of the eye with my left hand, which causes the aqueous humour to spurt out with greater force, and gives a better chance of the worm coming out with it.

"I have been very successful in extracting the worm in this way; and so perfect has the operation been, that in many in-

stances it could not be perceived where the lancet had made the puncture. In others, however, a considerable speck remains, and in some few cases opacity of the eye continues, though the operation has been performed with every nicety, and the worm extracted. Sometimes the worm does not come out when the eye is punctured, and it is necessary to allow the aqueous humour to accumulate again, and to repeat the operation. This may always be done in two days afterwards, and the lancet may be introduced at the same place where the former puncture was made. This I have repeatedly done, and succeeded in extracting the worm at the second operation.

"I am not aware that a cure can be peformed by medicines. I have often tried local applications, both of a sedative, and of a stimulating nature, but never succeeded in removing the opacity, or destroying the worm when it was strong and active.

"Internal medicines I have never used, not being aware of any that could affect or influence a living worm, through the medium of the circulating system."

ON FOREIGN BODIES IN THE ŒSOPHAGUS OF CATTLE. *By* W. Youatt.

ON the 27th of March last, a market-gardener in Fulham, on rooting up his parsnips, ordered them to be cut in pieces and given to his cattle. The hind gave them to the animals whole, who greedily devoured them, and a large piece stuck in the gullet of a valuable cow. It was evidently seen and felt about half-way down the œsophagus. The poor beast soon began to swell enormously, and panted sadly.

The cow-leech was sent for, who, using first the but-end of a cart-whip and then a long piece of osier, forced the parsnip below the entrance of the œsophagus into the chest. He had then no farther power over it with either of his rude instruments.

I was then called in, and, on applying a probang, found some body resisting its passage into the stomach, about six inches within the thorax. The animal was in dreadful agony. No alternative appeared to offer itself, and I endeavoured to force the obstructing substance into the stomach; but it resisted all my efforts. Then, turning the probang, and suffering the whalebone stilet to protrude, I found that it would pass nearly an inch

lower. By tapping gently but repeatedly, I found that I was gaining a little ground, and presently, on pressing firmly and equably on the probang, it passed into the stomach. A prodigious quantity of gas was extricated, with some very black fluid. The cow speedily decreased in size, and was evidently relieved. The probang was withdrawn with a little difficulty and returned more readily, but not with perfect ease. This I attributed to its being entangled in some of the folds or lacunæ of the œsophagus.

The animal still labouring under considerable excitement, I ordered her to be bled, and thinking that she was then safe, departed. In the course of the night she died. I was not present at the dissection, but the gardiner reported that quite at the lower part of the gullet a piece of parsnip root two inches long was firmly fixed with the smaller end downward; that the centre of it was decayed, and had been sufficiently perforated to admit the probang, and that the hole had been closed again with a kind of mucous matter and half-digested food.

I am not aware that, the parsnip being forced so far down the œsophagus, any other course could have been pursued, or that much blame can attach to me for mistaking the passage of the probang through the parsnip for the dislodgement of the body: if there be blame, let others profit by my error. I am induced however to offer a few remarks on the proper course to be pursued when foreign bodies are lodged in the œsophagus of cattle. It is an accident of no rare occurrence, and sometimes not a little puzzling and troublesome.

I would premise that the muscular coats of the œsophagus are differently constructed, and far more powerful in cattle than in the horse. In the horse, the fibres of the external layer are longitudinal, and the inner layer circular. In cattle the fibres of both are oblique, the external approaching somewhat nearer to a circular direction, and they cross each other at very acute angles. Thus both unite in effecting the double purpose of shortening and dilating the tube. The two opposite functions of the gullet of the ox, to swallow the food, and to return it for rumination, require this structure. Both layers are likewise considerably thicker and stronger than in the horse. They therefore contract very powerfully on any body which passes over or is lodged upon them: and, when they have been irritated by the long continued presence of the body, the force with which they contract is exceedingly great.

Hence the difficulty of dislodging any foreign substance; and the impropriety of using undue force in driving it downward;

for, in proportion to the force employed will be the counteraction of the muscular coats.

The probang should undoubtedly be first used, and a moderate force employed for a sufficient time. If no ground be gained, or only a little, and that with extreme difficulty, the tube should be withdrawn: for if the body can scarcely be moved in the middle of the œsophagus it will become perfectly fixed towards the cardiac orifice. A half-pint of olive oil should then be given, and an attempt should be gently but firmly made with the fingers, applied externally, to give the body a retrograde movement. This will succeed much oftener than is imagined. If it can be forced upward, and brought to the upper part of the œsophagus or into the pharynx, then, by means of a piece of wood resembling that belonging to the common probang, but with a hole sufficiently large to admit the hand, and firmly attached to the horns, the hand might be passed into the mouth secure from injury from the grinders, and the substance withdrawn.

Should the foreign body be moved with difficulty, and be known to be irregular and rough, so that the villous coat of the œsophagus would be lacerated or injured by forcing it either way, there are two methods remaining: either to bleed to syncope, and, during the momentary relaxation, to force the body upward or downward (the first if possible); or to have recourse to œsophagotomy. I can speak from the experience of two cases, that this is an operation very easily and safely performed, although Mr. Cooper tells us, and I have no doubt truly, that, on the human being, few would venture to perform it. In one case the wound was healed in fourteen, and in the other in eighteen days.

The operation is very simple. After having passed a little way down the neck, the œsophagus is on the left of the trachea, and between the carotid and the jugular. The artery will be detected by its pulsation, and the vein by its turgescence. Both are easily avoided, and a free incision may be made at once into the œsophagus, taking care not to wound the sterno-maxillaris muscle. The foreign body is then to be extracted, one or two sutures passed through the sides of the œsophagus, and one or two more through the integuments.

To the Editor of the Veterinarian.

SIR;

HAVING read in the third number of "The Veterinarian," page 101, a similar case to the following ones, I have sent them for insertion if you think them worthy.

I am, Sir, your humble servant,

W. A. CARTWRIGHT.

WHITCHURCH, SALOP,
May 16, 1828.

RUPTURE OF THE DIAPHRAGM, &c.

CASE I. On Tuesday, 11th March, 1828, about three o'clock in the afternoon, I was sent for to see a mare belonging to a coach proprietor. The mare having been hard worked was kept at home for three or four days; her legs then beginning to swell she was walked out about half a mile; but her respiration getting very laborious she was led home: she had had a very bad cough and a discharge from her nostrils a week or more.

Symptoms. Respiration similar to that in a severe case of inflamed lungs. Coughs with difficulty and that very weakly, and makes a rattling noise in her throat. Pulse about 60, but full and bounding. Mouth hot and dry. I then took about five quarts of blood from her and gave her a ball composed of aloes cape, ʒss. pulv. veratri ℈j. resinæ flav. ʒss.

Six, p. m. About this time she began to have every symptom of enteritis (except the pulse, which was strong and full): I then took about four quarts more blood from her.

Eight, p. m. No better. I now took, I should think, three or four quarts more blood from her when lying on the ground, and which was as much as she could bear, being very thin.—It was a little buffed.

Nine, p. m. No better. Respiration very bad, and she is every two or three minutes getting up and down, but rarely rolls on her back. Pulse full and from 60 to 70, but has not the feel exactly as in enteritis. Breaks wind a good deal when tumbling about, but is not swelled. The bleeding not having given the least relief, and, from the last mentioned symptoms being present, I determined on trying the following ℞: sps. terebinth. ʒj. tinct. opii ʒss. aqua bulbient ℔j.; about half an hour after I gave tinct. opii ʒss. aqua menth. pip. ʒij. which gave a little re-

lief, but she was shortly as bad as ever. She was then clystered several times and left to her doom. She continued to be as bad until about six next morning: and I should think she was up and down during the night two or three hundred times, and was in the most *violent* pain all night in which I ever saw any horse; her breathing was very laborious and she was repeatedly looking towards her chest.

13th. Six, p.m. Is become pretty easy and stands quiet, but her breathing is three times as quick as natural: after this her bowels were well opened. Pulse became very quick and feeble. Appetite bad. Respiration very difficult; stood up all the time and gradually sunk, and died on the 18th, rather suddenly.

Dissection. The peritoneum on the lower part of the abdomen was in a state of inflammation, but from its colour inclining to the chronic form.

The diaphragm was ruptured on the left side from the sternum to the spine, at the distance of three or four inches from the side of the chest, but it appeared quite a recent occurrence. One of the ribs on the left side of the chest had been fractured and was in part re-united, but there was no disease about the part. I am sorry I could not stay to examine the diaphragm more minutely.

Case II. On the 18th of March, 1828, I was going along a road near this town and saw a man skinning a horse. I went to him, and he said the horse was very badly broken winded, and he had been ploughing with him; but finding him getting unwell he unyoked him and he died in a short time after.

Examination. The diaphragm was ruptured on the left side similar to the above case, and appeared also a recent affair. There were several air bladders on the surface of the lungs near to their base, but not very prominent: otherwise they appeared sound.

The pericardium was in a most severe state of disease, being quite of a blackish colour and filled with dark grumous blood, partially coagulated. The heart was of a blackish colour, but sound.

Observations. The mare (1st Case) had been most severely worked for the last four or five months, and latterly whilst labouring under considerable catarrh: her owner was in the habit of knocking and kicking his horses about, and driving occasionally at a greater rate than their strength would permit, and it is probable that her rib was broken by ill-usage, and that peritoritis was brought on by her being kicked on the abdomen. Over

exertion and her excessive coughing caused partial rupture of the diaphragm, which was completed the day she was exercised, or soon after.

The latter case I attribute to excessive and repeated coughing, for the fibres of the diaphragm, in each case, seemed as if they were drawn from each other, being tapered out at their edges to the mere thickness of a wafer.

ON

ACUPUNCTURATION IN VETERINARY PRACTICE.

By W——.

THE operation of acupuncturation is of eastern origin. It is said to have been invented by the Chinese, and by them transmitted to Japan. Some allusions to it occur in a few medical writings towards the close of the seventeenth century; but the practice of it has only very lately been adopted by European surgeons. The wonderful tales that were related of its almost magical effects in eastern climes, have not been fully realised, and some eminent practitioners have even ranked it with the absurd reveries of animal magnetism. Experience however has shewn that it has great power in relieving many painful and obstinate nervous and muscular affections. On its theory mystery rests, and which I shall not attempt to develope.

I am not aware that it has been resorted to by any English veterinarian, except that I once used it with considerable good effect in a case of chorea consequent on distemper in a bitch. Some French veterinarians have given it an extensive trial.

It was first used at the Veterinary School at Alfort, on a paralytic bitch, but without effect.

In May, 1825, M. Chenel tried it in a case of chorea in a dog. One of the hinder legs was principally affected. Six needles were inserted in the thigh, and retained eight minutes. The insertion appeared to give very great pain, but the animal was tranquil while they remained in the thigh. On the following day six were inserted more deeply, and they remained twelve minutes, and on the succeeding day eight needles, which remained twelve minutes, and, after that, eight needles for twenty minutes. The pain was excessive—the whole of the limb swelled enormously—the dog refused his food, and a high state

of fever was excited. The inflammation and swelling, however, rapidly abated; the twitchings subsided, and in twelve days from the first insertion of the needles the dog was cured.

His second experiment was on the schirrous testicle of a dog. This completely failed. Enlargement, and pain, and general fever ensued, and the animal was relieved by castration.

His third experiment was on a mare with an old supposed rheumatic lameness of the hip joint. Fifteen needles were inserted on the first day, and twenty on the second and third days, and they remained an hour. The pain of insertion was very great, but the needles being once inserted the mare was quiet until they were withdrawn. She was taken away a few days afterward, but M. Chenel was informed that she became perfectly sound.

M. Charles Prevost next follows. His first case was that of a mare with rheumatism in both shoulders. Ten needles were inserted in each shoulder, and retained three hours; at the expiration of two days twenty needles were used, and not withdrawn until the expiration of twelve hours. Four days after this, thirty-six needles were applied, and continued twelve hours. The animal suffered dreadfully at each insertion, but was cured in three weeks.

Another mare had rheumatism about the hip joint. First ten, then twenty, and then thirty needles were employed, and in three weeks the lameness had disappeared.

M. Clichy was consulted respecting a mare that for fifteen or sixteen days had been so lame in the near fore leg as to be unable to put it to the ground. The lameness had followed a violent slip. No heat or swelling could be perceived. M. C. attributed the lameness to a sprain of the extensor muscles of the fore arm and determined to use the needles. On Sept. 24, 1826, six needles were inserted round the articulation of the scapula with the humerus. On the 25th, he applied twelve, and more deeply, and left them eight hours. Not only during the insertion, but while the needles remained in the animal, extreme pain appeared to be suffered.

On the 27th, eighteen needles were introduced, and remained twelve hours. On Oct. 1st, no relief had been experienced. Thirty needles were then employed, and more deeply, and thirty-eight on the seventh. On the 13th, forty needles were used. They penetrated to the depth of $1\frac{1}{2}$ inches, and were retained thirty hours.

On the 23rd, twenty-four needles were inserted to the depth of $2\frac{1}{2}$ inches, during which operation the animal is said to have

suffered excruciating pain. On Nov. 3rd, thirty needles, and on the 13th, thirty; and on Dec. 10th thirty more were used. The lameness then began to abate, and on the 10th of Jan. 1827, the horse was sound.

M. Bouley plunged twenty-four needles into the muscles of the loins of a horse whose hinder extremities were paralysed. No good effect was produced.

On the whole these experiments have been very unsatisfactory. One case of chorea in the dog was cured by acupuncturation, and another relieved. The attempt to reduce a schirrous testicle utterly failed. Two cases of supposed rheumatism were cured, but not in so short a time as that in which we generally succeed in removing a rheumatic affection by other means. In strain of the extensor muscles of the fore-arm, M. Clichy laboured hard for nearly three months, and although, at last, the lameness was removed, the cure is to be traced to the state of rest in which the animal was suffered to remain so long, more than to the influence of the needles. In paralysis of the hinder extremities, acupuncturation was totally useless.

From so few facts however we cannot draw any satisfactory conclusion. Two things however are sufficiently evident, that the sudden and magical relief which the human being has sometimes experienced has not been seen in the horse; and that, probably from the thickness of the integument, the animals suffered extreme torture during the insertion of the needles.

Those veterinarians who practice on so humble an animal as the dog, will, perhaps, try the effect of acupuncturation in that nervous affection which so much resembles the St. Vitus's Dance in the human being. Rheumatic affections, especially if accompanied by considerable spasmodic action, and which have then occasionally puzzled our most skilful practitioners, are fair cases for experiment; and I do trust that some zealous veterinarian will put the use of the needle fairly to the test, in that most dreadful and untractable disease, tetanus.

W—.

ON THE CASTRATION OF COLTS.

To the Editor of the Veterinarian.

SIR;

A RETIRED officer of the Indian cavalry, who has for some

years resided upon a small farm in my neighbourhood, has had two or three mares in foal every season, and in rearing the colts has adopted the eastern custom of not castrating the horses, and in every case where this has been tried I have seen it followed by complete success.

During the period that the young horses remain under the charge of his own groom, (and he seldom disposes of them till the fourth or fifth year, and sometimes longer,) they have invariably shewn themselves as docile as geldings at the same age generally are. Although I must confess, that, in some few instances, after passing into other hands, they have been somewhat less tractable. This I think must be owing to bad management generally, or carelessly allowing them to approach and tamper with mares while horsing, and which might of course be easily avoided.

The strength, symmetry, and spirit of the horse is always so much diminished; and the light, elastic, and bounding step, which every one who has been in the habit of riding entire horses must have found so agreeable, is so completely lost by this operation, that, could breeders be induced to give it up, or at least not resort to it until the temper of the horse shewed it to be necessary, it would materially tend to improve the breed of horses. Every one must have remarked many horses cast in nature's finest mould rendered, by castration, incapable of procreating their species.

Should you insert these few hurried lines in your valuable miscellany, I shall certainly feel proud, and highly obliged by having your opinion on the practicability of the plan, with any hints upon the subject generally.

Your obedient servant,

GEORGOS.

C—N MANOR, NEAR EDINBURGH,
May 15, 1828.

OUR opinion is dicided, that the present system of breeding cannot be materially changed; but we give insertion to the above letter, because the subject is important, and may elicit valuable remarks from some able and experienced correspondent. EDIT.

ON PRIZE ESSAYS BY PUPILS.

To the Editor of the Veterinarian.

SIR;

YOUR well-known attachment to, and zeal for the improvement of that profession which has the honour of ranking you amongst its members, assure me that the following suggestion will meet your attention. A thorough conviction of its utility in advancing the respectability of future veterinarians has induced me thus to venture to offer it to your notice. I propose that, each month, you offer a subject to be discussed by pupils (not having attended the college) of private practitioners. Praise-worthy ambition is predominant in the mind of youth. Frank and generous, they heed not pecuniary remuneration, and the insertion in "The Veterinarian" of the best essay will be a sufficient stimulus to exertion. By this means a spirit of emulation—that great incentive to industry—will be diffused amongst them; each will use every endeavour, will call forth every latent spark of talent, to gain the meed of fame. Not content with what they may merely hear or read, they will be convinced by ocular demonstration alone; and, to gain ocular demonstration, they must and will have recourse to dissection. Thus, out of the great number of young men who annually enter the college, a few at least will commence a course of close and profound study, with some degree of preparation; they will in youth have acquired habits of research and industry, which in manhood they will have no inclination to discard. Anonymous writing ought to be discouraged in young men, therefore it would be advisable that every communication should be made under a proper signature. However, I leave the subject for your consideration, confident that the decision you may come to will be for the good of the profession.

Yours, &c.

W. H.

THE VETERINARIAN, JUNE, 1828.

"Licet omnibus, licet etiam mihi, dignitatem *artis veterinariæ* tueri."—*Cicero.*

MANY of our readers have, doubtless, received a circular from a small but respectable body of veterinary surgeons, appointing a meeting of the profession, on the 10th inst. to establish a Veterinary Medical Society, and to take into consideration the principles on which it should be founded, and the laws by which it should be governed.

The object proposed is most important in the present state of our art. Veterinary periodical publications afford a proper medium for the accumulation of discoveries and facts, but their limited number of pages, and the multitude of subjects which they embrace, will not admit of the full and satisfactory discussion of many interesting questions.

Veterinary science is yet in its infancy. Its principles are scarcely understood, and nothing can be so dissimilar as the practice of different surgeons on the same case. An ingenious essay may correct some false principle or mal-practice: but the essay itself may not be free from error. It contains the opinions, and, possibly, the fallacious theory of an individual. Some truth may be diffused, but false reasoning and practice may occasionally be disseminated.

In a medical society every opinion and statement is brought to the test of argument. The wheat is separated from the chaff. That alone which is of sterling value is retained, and the remnant of antiquated prejudice, or the suggestions of inexperience are rejected: and when, at the close of the discussion, the veterinary periodical communicates to the public the decision of an assembly, guided by the love of truth, and fitted by their habits and pursuits to decide justly, the advantage that will accrue to us in our present state of knowledge can scarcely

be calculated. We would therefore entreat every veterinarian to take the matter into his serious consideration, and, even at some inconvenience, attend the proposed meeting.

Veterinary practitioners should be brought more together. In the present state of our art, doubtful of the soundness of some of our principles, and feeling, if we would honestly confess the truth, that many important points of practice are yet enveloped in mystery, we carry a bold face to the world, but we are afraid and jealous of each other, and our professional intercourse is occasionally characterized by a reserve, and selfishness, and illiberality, perhaps something even worse than these, and which reflect on us no credit.

When we have been accustomed to meet together, and to unite in the work of mutual improvement, we shall have a more kindly feeling towards each other, and be compelled, as well as disposed to act with candour and with honour.

We shall likewise measure each other's strength. We shall find out of what our profession is composed. We shall discover the peculiarities of each other's tact and skill. We shall know where to have recourse in cases of perplexity; and we shall know where to look for the competent instructor, when advanced age or premature death may have taken from us the present heads of our profession. Some of us, perhaps, may have been undervalued, unknown. Others may have held their heads a vast deal too high. A society like this will place each man on his proper level, and the art and the public will reap the benefit.

The object of the society is well stated "the advancement and diffusion of veterinary knowledge," and of this, we trust, the members will never lose sight. Their meetings ought never to be the arena on which angry and malicious spirits contend. The debates of the society should never be perverted to the gratification of secret pique or dastardly revenge. No personal invective, no attack on private feelings, should be permitted to destroy its respectability, pleasure, and utility. The free, fair,

full, candid, friendly discussion of subjects "connected with our practice" will sufficiently occupy us, and will alone "essentially and rapidly promote the advancement of veterinary science."

The description of its proposed members is sufficiently comprehensive: "all persons engaged in the study or practice of veterinary medicine;" the student zealous and theoretical, the practitioner experienced and cautious.

The first meeting, we understand, is to be confined to veterinary surgeons, or those who, having been educated at the veterinary college, are now in actual practice. For them the society is principally intended; by them it must be chiefly supported, and by them alone can all its advantages to the profession and the public be secured. When it is fairly established it will be thrown open to "all persons engaged in the study and practice of veterinary medicine."

One object, *viz.* the possible (we hope the probable) commencement of a most important publication, a collection of scientific and well-digested papers, under the title of "Veterinary Transactions, &c." has our most cordial approval. We were taught to look for these "Transactions" elsewhere. We ought to have had them. We must now endeavour to produce them ourselves, and perhaps we may allure those, whose works should have annually stood on record, to furnish us with a part, and the most important part of these volumes.

We do hope that, at no distant period, the veterinary society will rank among its members every zealous and scientific practitioner. If the love of truth, and the determination to vindicate the dignity of the veterinary profession, uncontaminated by any sinister purpose or party feeling, influence and govern the proceedings and discussions of the society, we are assured that "the advancement of veterinary science will be essentially and rapidly promoted."

It being determined that a copy of the proposed laws and regulations should, if possible, reach every veterinary surgeon, we are desired to state, that if any gentleman has been unin-

tentionally omitted, and will address a line (post paid) to Mr. Youatt, 3, Nassau Street, Middlesex Hospital, (the secretary *pro temp.*) it will be immediately forwarded to him; and any suggestions as to the better accomplishment of the intended purpose will be thankfully received, and laid before the meeting.

We feel equally with our correspondent W. H. (is there not some mistake in the two first letters of the post-mark ?) the importance of cultivating a spirit of inquiry in our young friends. The ignorance of the farrier will no longer be tolerated in the veterinary surgeon. The members of our profession must vindicate their claim to public respect, by diligent research and scientific acquirements.

We will extend the plan of our *friend,* W. H. to all veterinary students, whether residing with private practitioners or having entered at the Veterinary College, and not exceeding the age of twenty-one years: and we will propose as the first essay, "The roots, course, peculiarities, and functions of the five first pairs of cerebral nerves."

We will not only insert in our journal that paper, which, after deliberate examination, we shall deem the best, but, if our friends display the industry and talent which we anticipate, we may be induced to present them with a medal, of little value possibly in itself, but the honest testimony of our esteem.

Each essay must be headed with a motto, and subscribed with an initial. We will in our number for September declare the initial, and the successful candidate will then favour us with his name and address, and a copy of the motto as a verification of his claim; and a declaration from the preceptor, or master or father, that the essay is *bonâ fide* the composition of the candidate, and the result of his unassisted dissection. All essays must be sent (post paid) on or before the 15th of August.

We stop the press to give a brief account of the annual meeting of the subscribers to the Veterinary College, held to-day, (May 28,) at the Thatched-House Tavern. A more detailed narrative shall appear in our next, with such remarks as the very extraordinary circumstances of the case may appear to require.

John Holme Sumner, Esq. was in the chair.

The first business was to confirm the minutes of the preceding meeting. The office of president having become vacant by the death of His Royal Highness the Duke of York, it had been recommended, humbly to solicit the Duke of Clarence to occupy that situation. The delegation now announced that His Royal Highness had graciously acceded to their request.

The constitution of the medical examining committee had been the subject of discussion at the last meeting, and it had appeared to the subscribers, and had been acknowledged by Mr. Coleman, that the committee would be more effective, and much advantage would result, if a limited number of veterinary surgeons were added to the present examiners. As a matter of courtesy it was resolved that application should be made to the present examiners, to ascertain whether they were willing to admit some veterinarians among them.

Sir Astley Cooper, Drs. Cook and Pearson, and Messrs. Bell, Brodie, Coleman, and Green were present when this application was made. They gave to it no direct reply; but recommended that a second and distinct committee should be formed, consisting entirely of veterinary surgeons with the two professors, before whom the candidates should first appear, and, if passed by them, should afterwards undergo the ordeal of the old committee.

A special meeting of governors had been appointed to receive the determination of the examiners, and that meeting foreseeing the confusion which would necessarily, and the misunderstanding which would probably arise from so crude and undigested a proposition unanimously rejected it, and requested the old committee to continue their functions. Possibly—we say possibly,

for we are not of the elect, and were not present—they felt that its adoption would be an insult to the whole body of veterinarians. It would declare too plainly for any ingenuity to controvert that the humble veterinarian was not deemed worthy to mingle with human surgeons. We should have despised the man who would have degraded himself by becoming a member of such a committee.

The propriety of this rejection was, to-day, unanimously confirmed; but, it being the decided opinion of this meeting, as well as of the last, and it having been again acknowledged by Mr. Coleman that the profession would be benefited by the union of some veterinary surgeons with the human practitioners, and there being no *official* proof of the unwillingness of the human practitioners to admit these new associates, it was moved and carried that the governors should again have communication with the present examining committee, and ascertain their opinion and wishes.

It should however be stated, that it was acknowledged by one member of the adjourned meeting of governors, that the principal reason which swayed them in their determination, was their belief that this amalgamation would be unpleasant to the old examiners, and Mr. Coleman confessed that the old examiners had this feeling. They had hitherto been harmonious and the institution had flourished, but they knew not what disagreeable circumstances might arise if strangers were admitted among them.

Thus then the matter stands—two general meetings of the subscribers have declared there conviction, that a certain number of veterinarians should be added to the present examining committee—the professor has given to this his unqualified approval, and, we will add, that there is not a veterinary surgeon who does not demand it as an act of justice, as well as of essential benefit to the profession.

We know what we owe to the present committee. We fully appreciate their acquirements and their skill. But we must

tell them, what their own hearts will echo, that they ought not to be the only examiners. They are not qualified justly to *decide* even as comparative anatomists, and most certainly they cannot be adequately acquainted with the pathology of the horse and other domesticated quadrupeds.

Courtesy and honourable grateful feeling have placed them where they are, and there we trust they will remain; but the human surgeon is not, and can never be the thoroughly qualified examiner of the veterinary pupil.

With the aid of a few veterinary surgeons, (are we in truth so degraded, that they will not associate with us? then fye on the system which has been too long pursued!) and those surgeons independent, unconnected with the college, uninfluenced by favouritism or dislike, a committee might be composed, combining as at present the first medical talent of the kingdom, with humbler, but here, more useful, practical knowledge. The friends of the profession would rejoice, and its enemies would be deprived of their power to misrepresent and traduce.

We anxiously await, or rather, we confidently anticipate the decision of the committee of examiners.

We have not space for more in the present number, except to say, that although one of the subscribers might in the fulness of his zeal force himself a little too often and pertinaciously on the patience of the meeting, he did not quite deserve to be rudely told by the chairman, he was "a person of no kind of consequence,"—consequence—what is that? All this is wrong and cannot come to good.

It appears that, since the last report, 56 pupils have been admitted—that the college has a disposeable fund of £5,000; that 869 horses, and 16 dogs, and 1 ass were admitted into the infirmary; of which the ass, 585 horses, and 11 dogs were cured, 19 horses and 1 dog died, and 23 horses were reported incurable and destroyed.

Review.

"Let me suppose you have surmounted the teasing employments of printing and publishing, how will you be able to lull the critics; who, like Cerberus, are posted at the avenues of literature, and who settle the merits of every new performance?"—*Goldsmith.*

The Veterinary Surgeon; or, Farriery taught on a New and Easy Plan. By JOHN HINDS, *Veterinary Surgeon.* Price 12*s.* Sherwood & Co. 1827.

EXULTING in the new light which has lately broken on the veterinary world, and anticipating the speedy approach of that period when the profession will assume its proper station, both in real acquirement and public estimation, we observed with much interest the first announcement of this work. That interest was not decreased when we were informed by Mr. J. Hinds, in his preface, that "the reputation of our name (not, gentle reader, the names of the humble editors of "The Veterinarian") induced *the bookseller* to ask my father's opinion and mine," respecting some professional MSS.; and that, in an honourable contention for a certain premium for the best essay on the structure of the horse, and on which occasion our best writer on veterinary anatomy deigned to enter the arena, Mr. J. Hinds bore away the first prize.

In the publications of Messrs. Coleman, Blaine, Percivall, Peel, Goodwin, and Clark, we have many excellent instructions to form the veterinary surgeon; but here, we thought, must be "The Veterinary Surgeon" *par excellence;* not "of the *old school,* or rather *no school;*" (p. vii.) without "the laughable sublimations of cotemporaries," (p. ix.) and who would fully and honestly teach us "how the process of nature is carried on in health, and the cure to be effected in every species of derangement." (p. x.)

The veterinary art in England, although nearly forty years have elapsed since its birth, is yet a child of too stinted and tardy growth; and the student, both young and old, will equally listen to the instructions of a master who promises so fairly and so much as does Mr. J. Hinds. We crowd to his introductory lecture, in which he tells us "how the process of nature is carried on in health."

The "muscles to move the limbs aright," and the glands to secrete the various fluids, are most important organs. How are they composed? "Muscle is constituted of blood deposited in the membrane, innumerable small *arteries*, some of which are scarcely visible, terminating within each muscle by a kind of doubling-up or curl; within each of these a corresponding vein is twined, and the whole being covered with the finest membrane constitutes a gland." (p. 78.)

How was it that Messrs. Percivall and Blaine had not discovered this luminous and beautiful connexion between the muscular and glandular system; or why should they carelessly omit to tell us that "the smaller glands have each a small tube attached to it, which seems intended to hold the acrid and other noxious matter, which its lymphatic had refused to take up, as being at variance with its proper function?" and that "here it remains concealed, until the proper time arrive for carrying it off, and without which it is clear that disease of one sort or other must ensue." (p. 79.)

In the whole of their works have they given us so admirable an illustration of the processes of nutrition and circulation as the following, and so perfectly according with the sentences we have just quoted, and so strictly grammatical? "As the lacteals absorb only *nutritious* juices, so the lymphatics absorb none but *offensive* ones, as the matter of diseases, wounds, spavins, broken bones, ulcers, and the useless part of the deposite made by the arteries; these being mixed passed through the heart, there receive fresh vital powers, and thence to the liver, there to be purged of its bad qualities, which passing incessantly into the intestines is soon eliminated with the dung." (p. 82.)

Fye, gentlemen! To your studies! and apply to yourselves the following exquisite elucidation, of a metaphysical as well as a pathological question, "Conscience (consciousness) which agitates the nerves by the faculty of thinking, when applied to the evils that are in the world, does sometimes cause the accession of fever to those delicate organs in human nature." (p. 84.) "Since writing the above I have ascertained *upon the view*, that a horse rankling under the effects of mal-treatment, absolutely broke the cells of his heart, through high-spirited chagrin." (p. 138.)

What simile can be at once so brilliant and so correct as this, "In the pleura then are wrapped up, as in *two silk handkerchiefs*, the two lobes of the lungs."

The description of the larynx is perfectly unique. "Next to the throat these cartilages form a curious kind of chamber,

termed *epiglottis*, over which (excellent anatomist!) is a lid or valve, placed there to defend the passage into the *air*-tube, from the entrance of victuals, drink, &c. For upon the descent of any such substances this valve shuts down like a trap-door, and they pass over it. No sooner, however, are they gone past, then up rises the valve again, lying back towards the mouth on the palate, and being very large in the horse, accounts for the gulps with which he takes in water, and his peculiar mode of feeding." (p. 88.) We think we see our standard anatomists conning over this most scientific and eloquent delineation.

" Amphyon blushed as red
" As any glowing flame;
" And Orpheus durst not shew his face,
" But hid his head for shame."

The pugilist and the hunter know the full value of " second wind," but, possibly they cannot explain the process by which it is acquired. Hear Mr. J. Hinds. " Take a pair of bellows, and having introduced the nossle tolerably well into the wind-pipe of a sheep, tie it round with a *cobbler's end*, then blowing hard, the lights or lungs at first give out the whole of the air that has been driven in, and may be inflated to an enormous size. Out of this may be derived a more accurate knowledge of what it is termed 'second wind' among sportsmen when the animal or man has made great exertions so as to fill all the cells of his lungs to the utmost, and then relaxes from the labour, he finds himself renovated, the cells being rendered more capable of distension and expulsion, when each inspiration and expiration also occupies more time and less labour." (p 91.)

The bear however is the most curious experimentalist. " Seizing the dog between his paws, he squeeses him up till he gasps for breath, when bruin, being muzzled, rams his nose tight into the dog's mouth, and blowing with all his might you may hear the wind whizzing: the dog swells all over, by reason of the air entering the cellular membrane, and he dies unless timely pulled off." (p. 92.)

But we will spare the intellectual optics of our readers, and not blast them with the excess of light, which blazes from this most sublime system of physiology.

In pathology our author is not less happy. Listen to him on gastritis. " At times a specific inflammation takes place, and communicates itself in four or five days to the whole of that *surface*, taking its course downwards or upwards according to the *orifice* that may be most affected; this being all the way down through the intestines, blocking up the influx of gall, and caus-

ing yellowness of the eyes, until its appearance at the *anus*, or in the other case as it ascends up to the nostrils, making its appearance first about the head, and communicates either-way to *the skin* and its coat." What admirable perspicuity and precision!

How satisfactory Mr. Hinds's account of the functions of the liver. "Any disease with which it (the liver) may be attacked must be proportionably violent in its progress, and difficult to cure, inasmuch as both will depend upon the state every other *viscus* may be in through which the blood happens to have passed. Are the kidneys or either of them inflamed? the blood which has recently passed through them comes to the liver to get rid of its noisomeness in the form of bile. Is an *abscess* to be dispersed, and the acrid matter to be driven from the part to be taken up by the lymphatics? at the liver it must be strained off, and here must be imparted a portion of its baleful qualities." (p. 135.)

The cause and progress of hepatitis are described in a novel and luminous manner. "Inflammation of the proximate organs, as of the *diaphragm* to which the upper portion of the liver is strongly attached, as well as *the kidneys* to which the off side thin portion of the liver is adjacent, communicate their baleful heat to this fine organ, and an increased formation of bile is the immediate consequence. The blood in passing through the liver acquires a portion of this extra heat, which re-produceth more at its next passage through it, more at the next, and so on, until the inflammation of the whole liver is completely affected." (p. 263.)

Pneumonia "is occasioned by a sudden check given to the circulation by cold," and "the *cure* is sometimes mainly affected by the effusion of water in the chest, which frequently takes place upon bleeding the patient: the practitioner has little more to do than place himself in the situation of the handmaid of nature, and all will go on well towards perfect restoration." (p. 195.)

There is one method of cure which used to be strenuously recommended by the professor of the veterinary college, the propriety of which we will not at present discuss, but it behoves Mr. Coleman seriously to consider the following most ingenious and unanswerable objection to it. "Mr. Coleman advised turning the horse into a loose box, leaving open the apertures, *without clothing*, or paying any regard to the season. Nought however could be more absurd than to suppose that a disease which is produced by cold, should have the continuance of cold prescribed for its cure." (p. 199.)

We will quote but two other passages from the pathology, and then refer our readers to the book itself, for new, and profound, and satisfactory information respecting every malady to which the horse is subject. The first disperses all the obscurity in which some diseases, the most mysterious as well as untractable, have been hitherto involved, and entitles him to the cordial thanks of every veterinary practitioner. "Strangles, glanders, farcy, grease, agree together so nearly in cause, symptoms, and effect, that the situation of each on the various parts of the body constitutes the main distinction between them, as this does also affect the appearance and consistency of the *matter* produced." (p. 339.)

The second is altogether original, and will assuredly immortalize "The Veterinary Surgeon." "I have very little doubt that the marrow is concerned in the production of grease, for I have successively examined twenty legs which were affected with grease at the time life was extinguished, and the marrow was invariably confined to the lower part only, as if it were fallen down there for want of vigour, whilst the upper part of the bone was hollow in every instance." (p. 377.)

As an etymologist Mr. J. Hinds is not less successful. "Surfeit and mange are of French origin, as I apprehend; *sur-fait*, or *over-done*, being tantamount to *mange in its imperfect tenses*, the effect of eating too much." Worthy coadjutor of Tooke!—Again, "from the word *lacta* (milk) these vessels are termed *lacteals*." "*Vives*, from the French *avives*, and the verb *aviver*, to be brisk and lively, as if it were conferred ironically upon the animal in his dullest state." (p. 332.) "I have long been of opinion that *poney* is derived from the apparently great pain (in Latin, *pœne*,) they sustain in performing their work. Hence I infer Dr. Johnson was not justified in leaving out the *e* in poney." (p. 37.) Johnson, Parr, and Porson, hide your diminished heads!

One sample of decent writing, "If the dung comes forth in small hard knobs, like gingerbread-nuts, the arse-gut must be cleared by the hand." (p. 243.)

One last specimen of polite writing;—that style which "The Veterinary Surgeon," no longer a farrier, no longer characterized by his ignorance and brutality, but assuming the rank, and feelings, and conduct of a gentleman, will now adopt. It is true that the persons whom he is attacking, Messrs. Goodwin, and Bracy Clark, are altogether insignificant, and require not that the common rules of courtesy should be observed with regard to them. Mr. J. Hinds quotes from Mr. Goodwin that Mr. Bracy Clark had remarked that the French mode of shoe-

ing harmonizes with the shape of the coffin-bone, and he thus goes on, (p. 433.) "'This is *certainly* correct,' adds Mr. Goodwin, complacently aiding the assertion of his preceptor; but it is nevertheless a ——— sad blunder, as any one not blind may perceive at a single glance." The insinuation intended to be conveyed by the dash, if made in conversation, would, we doubt not, have received its proper and deserved reply.

But enough, and more than enough of "The Veterinary Surgeon." We enter our indignant protest against this promulgation of the grossest error under such a title. It is the most abominable and bare-faced attempt at literary imposition which we remember to have seen. If Mr. J. Hinds be a substantial person, he is in truth of "no school," nor, we fear, would any school do him good. If the work be a mere compilation, shame on the venal, incompetent scribe; and double shame on the veterinary surgeon, under whose sanction, it is whispered, the book was foisted on the public!

There is, however, a spirit of benevolence frequently exhibited, of which we highly approve. We cordially join in the wish of the compiler, that the horse "was endowed with one more faculty, that he might distinguish between those who really love him and those empirics who make a profit of his sufferings, and that he might kick some among them as an example to all the rest." Mr. J. Hinds will not, after all, have written in vain, if he may have taught the groom or the farrier a little humanity.

FRENCH VETERINARY PUBLICATIONS.

WE have just received the fourth and concluding volume of M. Hurtrel d'Ambroval's "Dictionnaire de Médécine et de Chirurgie Vétérinaires." We will endeavour to give some account of the work in our next number.

We have likewise received the two first livraisons of Messrs. Leblanc and Trousseau's "Atlas Vétérinare." It will consist of twenty-seven large plates (18 inches by 12), and some of them beautifully coloured, of the anatomy of those parts of the horse, the ox, the sheep, and the hog, on which serious operations are occasionally performed; the teeth of these animals and of the dog, as indicating their age; and some veterinary in-

struments, with descriptive letter-press. The price of the whole, 35 francs.

The three first plates contain the arteries, veins, and nerves of the face and head generally, the region of the parotid gland, and the upper part of the throat. The union of the occipital, auricular, temporal, parotideal, internal, and submaxillary veins to form the jugular is accurately and beautifully delineated. The testes are represented, one enveloped in the tunica vaginalis, the other displaying the contents of the spermatic cord. The plate of the nerves and vessels of the fetlock and pastern contains the most satisfactory illustration of the operation of neurotomy that we have seen.

The second livraison contains the teeth of the horse—the foot of the ox, viewed anteriorly and laterally—the paunch of the sheep—the veins in the face of the sheep—the puncta lacrymalia in the horse, the lacrymal sac, and the tendon of the orbicular muscle; and the testes of the ram. No letter-press is yet given, but the plates are beautiful, accurate, and cheap.

M. Rigot, Anatomical Professor at Alfort, is preparing a series of lithographical plates, of those parts of the horse which are most connected with surgical operations, and of the natural size. The first plate will contain the anatomy of the metacarpals and phalanges.

Extracts from Journals, Foreign and Domestic.

ON DISEASES OF THE JOINTS IN COLTS.

By M. Benard, *Veterinary Surgeon at Boulogne, and Member of the Societies of Agriculture and Commerce.*

SOON after the brood mares are sent to plough, while suckling their foals, M. Benard tells us that, near Boulogne, the colts are often suddenly attacked with inflammation of one or more of the joints, the knee or fetlock before, or the hock and fetlock behind. This lameness rapidly increases, and the disease is often fatal. From its commencing when the mother begins to be hard-worked, M. B. attributes it to some change which her milk undergoes.

There is not, at first, either heat or inflammation in any ar-

ticulation; but, about the second or third day, both heat and enlargement are sufficiently evident. The animal is unable to throw any weight on the diseased limb, and continually lies down. Loss of appetite, fever, and laborious respiration speedily follow. At the fourth or fifth day the swelling begins to diminish, but the colt usually dies about the sixth day.

Sometimes the swelling proceeds to abscess. The fluctuation of the enclosed pus is evident, but it is of little consequence whether the abscess be opened or suffered to take its course. There is generally a sudden metastasis of inflammation to the lungs or intestines, and the colt quickly perishes.

On dissection, there appears to be considerable congestion or inflammation of the lungs, and sometimes of the pleuræ, while the mucous membrane of the trachea and bronchiæ is of a violet colour.

The disease must be attacked through the medium of the mother. If she exhibit any fever she must be bled, put on a mash-diet, and 1½ or 2 oz. of nitre given daily. Many prefer that the colt should be suckled by a foster mother, or nourished artificially by the milk of a cow.

The joints should be diligently fomented with a decoction of marsh-mallows or poppy-heads.

The disease evidently depends on the mare. If she have one colt affected with it, the next will rarely escape: but, if that colt be suckled by another mare, he will generally be free from disease.—*Recueil de Méd. Vét. Mars*, 1828.

SCROTAL HERNIA IN COLTS.

THESE swellings occasionally appear in the scrotum of the colt a few days after the birth. Sometimes they occupy one side only of the bag. Occasionly both are distended. In a few instances the scrotum becomes as large as a child's head. These are true scrotal hernia. A portion of intestine descends into the scrotum. Bandages and topical applications are perfectly useless, or produce irritation and pain.

At an uncertain period the swelling begins spontaneously to diminish, and at length entirely disappears. Where it has occupied both sides of the scrotum it is more slowly reduced; and the reduction of one side seems to be perfectly independent of the other.—*Recueil de Méd. Vét. Fev.* 1828.

INOCULATION FOR STRANGLES.

M. TOGGIA, Jun. has introduced this practice in the neighbourhood of Turin. He inserts the mucus which flows from the nostrils, after the tumour has begun to form, and he produces a disease with every character of strangles. A defluxion from the nose appears about the 7th day after inoculation. On the 8th day the specific tumor is seen, and which, if no means be used to hasten its suppuration, may be opened on the 14th day. In 1823, he inoculated more than 80 colts, in all of whom the disease assumed the mildest form, and in none of them has it appeared a second time.—*Sul Cimurro, &c. Torino,* 1826.

AMPUTATION OF THE PENIS IN THE HORSE.

NEITHER Percivall nor Blaine speak of the amputation of the penis, an operation of rare occurrence, but which the veterinarian may deem it necessary to perform. M. Huzard examined a penis covered with chancres and warts, which he pronounced to be incurable, and determined on amputation. He passed a canula into the urethra to secure the passage of the urine, and then applied a strong ligature round the penis below the diseased part, and which he daily tightened. On the 8th day the separation was complete, and the animal did well.

M. Barthelemy, Jun. was consulted respecting a horse which had relaxation, or paralysis of the penis. It protruded eight inches, and was slightly tumefied, but presented no appearance of inflammation. Various means were tried in vain to remove the paralysis, and the protrusion rendering the horse almost unserviceable: amputation was resorted to. A canula was passed as by M. Huzard, and a flat ligature moderately tightened was placed an inch beyond the place where it was determined to make the incision.

The section however had no sooner been made than the remainimg part of the penis was forcibly retracted within the sheath, displacing both the ligature and the canula, and very little hemorrhage followed. For five days some bleeding accompanied the emission of urine, evidently depending on the partial erection which always precedes this process in the horse.

In 10 days the horse was apparently well and sent to work. About the 30th day however there was considerable difficulty in the emission of urine. In the act of healing the skin had grown over the orifice of the urethra and nearly closed it.

M. Barthelemy attempted to enlarge the opening and introduce a canula, but the retraction of the penis rendered this impracticable. He then determinated to make an incision into the urethra from the perinæum, but there was no possibility of introducing a sound. He however cut into the urethra, and emptied the bladder. A sound was now passed through this wound, and carried to the extremity of the urethra; a crucial incision was made on this newly formed skin, which had impeded the flow of the urine, and a canula was forced through it. The other end of the canula was now passed into the wound in the perinæum, and carried a little way up the urethra and there secured, so that the urine flowed principally through the canula, but partly through the wound in the perinæum. In a few days the animal was again sent to work. The canula was taken out every two or three days to be cleaned, and in about two months the upper wound had healed, when the canula was finally withdrawn.—*Recueil de Méd. Vét. Fev.* 1828.

Amputation of the penis has been performed several times at our veterinary college. No canula is introduced; but the sheath is turned back, the penis drawn out as far as possible, and then cut through with a bistoury at one or two incisions. The remaining part of the penis is immediately retracted. Little hemorrhage is produced, except that for a few days in the act of passing urine a slight bleeding ensues. The orifice of the urethra is kept sufficiently open by the gush of the urine, and no untoward circumstance has arisen.

We much prefer this simple mode of performing the operation. The separation by ligature is slow and painful. The introduction of a canula previous to the operation, can effect no good purposes. It cannot be retained; and the act of cutting on it, may render the incision more irregular, and more likely to close at the orifice of the urethra, and produce partial or total suppression of urine. EDIT.

Cases or Communications, addressed to the *Editor of the Veterinarian,* at the *Printer's,* (post paid) will meet with due consideration.

John Hill, Printer, Black Horse Court, Fleet Street.

THE

VETERINARIAN.

VOL. I. JULY, 1828. No. 7.

ANATOMY OF THE HORSE.

(Continued from page 190.)

ANTERIOR MAXILLARY BONES. (OSSA MAXILLARIA ANTERIORA.)

Situation.—Supero-anterior and antero-lateral parts of the face.

Form.—Irregular; consisting of a broad, thick portion or base, turned forwards, from which is sent off a thin flexible plate; and a narrow, elongated, tapering portion, turned backwards.

Division.—Into three surfaces and three borders.

SURFACES.—*The superior* or *nasal surface* is smooth, convex, and oblong; more extensive externally than internally; and free from all connexion, it forming one side of the nasal space, in correspondence with its fellow. Outwardly, it affords attachment to the nasalis brevis labii superioris; inwardly, it is invested by the pituitary membrane. *The inferior* or *palatine surface* is vaulted, it contributing to the formation of the palate: within it, of an oval form, is the interdental space, which is occupied by two thin flexible plates, the palatine processes denticulating along the sides with each other. In the side of the bone is a deep hollow, for the reception of that portion of the superior maxillary bone which holds the tusk; and the remainder of the surface, posteriorly, is articulated with the same. *The anterior* or *labial surface* is broad, smooth, and convex, and gives attachment to the depressor labii superioris, the gums, and the membranous and cellular tissue entering into the composition of the upper lip.

BORDERS.—*The anterior border* is broad and curved, and is composed of two laminæ, formed apart and divided by five

transverse *septa* into six conical alveolar cavities, for lodging the incisive teeth. *The posterior border* is narrow and sloped off, and denticulates with the nasal bone. *The internal border* is broad, quadrilateral, and curved, and denticulates with its fellow, forming thereby the superior maxillary symphysis, through which runs the foramen incisivum, for the transmission of the palatine arteries.

Particularities.—These bones are remarkable for smoothness of surface, and closeness and hardness of texture. They are united at the symphysis, in the young subject by a fibrous cartilage, in the adult by osseous matter; so that, by maceration, they are separable in the one instance, inseparable in the other. Their alveolar cavities increase in number and size with the age and growth of the animal.

Connexion.—With the superior maxillary and nasal bones, and with each other.

MALAR BONES. (OSSA MALARUM.)

Situation.—Antero-external part of the orbit.

Figure.—Irregularly triangular, presenting a broad basis forwards.

Division.—Into three surfaces, three angles, a basiform and an apiform extremity.

SURFACES.—*The internal* or *facial surface* is divided into two portions by the zygomatic angle or spine: the upper division is smooth and nearly flat, with the exception of a depression anteriorly, which marks the attachment of the nasalis longus labii superioris; the lower part is narrow, and roughened by the adherence of the masseter. From this surface, posteriorly, arises the zygomatic process, which is very obliquely sloped off, and laminated for adaptation to the process of the same name, meeting it from the temporal bone, the two together forming the zygomatic arch. *The internal* or *maxillary surface* is concave, to enlarge the capacity of the maxillary sinus, to which it contributes. *The orbital surface* presents a smooth concavity, which forms the infero-external part of the orbit, and is separated from the facial surface by the orbital angle.

ANGLES.—*The inferior angle* constitutes the principal part of the zygomatic spine: it is continuous with the temporal bone behind, and in front with the superior maxillary. *The superior angle* is lunated, and constitutes the infero-external portion of the orbital circumference. *The posterior angle*, or rather border, is jagged and irregular, and unites with the superior maxillary bone.

EXTREMITIES.—*The anterior extremity* or *base* is broad, irregular, and denticulated, and articulates with the superior maxillary and lachrymal bones. *The posterior* or apiform end forms the zygomatic process.

Particularities.—These bones contribute to the formation of the orbits, maxillary sinuses, and zygomatic arches; and their articulations exhibit a sort of dove-tail mechanism.

Connexion.—With the temporal, superior maxillary, and lachrymal bones.

LACHRYMAL BONES. (OSSA LACHRYMALIA.)

Situation.—Antero-external part of the orbit.

Form.—Irregularly infundibuliform.

Division.—Into three surfaces and five borders.

SURFACES.—The external or facial surface triangular, flattened, and smooth, is bounded, laterally, by the external and internal facial borders; superiorly, by the orbital ridge. It exhibits, a little above its centre, a rounded eminence, the lachrymal tubercle, to which is fixed the orbicularis palpebrarum. *The internal* surface is concave, but very irregularly so, being divided into two hollows by a cylindrical prominence, caused by the lachrymal conduit. It constitutes part of the roof of the maxillary sinus. *The orbital surface* is triangular and smooth, deeply excavated in front, extended and flattened posteriorly, and makes the antero-external side of the orbit. In the excavated part are observable a circular depression, marking the origin of the short oblique muscle of the eye, and, before the depression, the lachrymal fossa, a funnel-shaped hollow, forming the entrance into the lachrymal canal: within the hollow reposes the lachrymal sac; the canal is traversed by the lachrymal duct.

BORDERS.—Denticulated, with the exception of the nasal, which is plain. *The external facial border* articulates with the malar bone; *the internal facial* (including the nasal border), with the nasal and frontal bones; *the external orbital border* unites with the malar and maxillary bones; *the internal orbital border* with the frontal bone.

Particularities.—A semi-transparent bone, important from its connexion with the lachrymal apparatus.

Connexion.—With the frontal, nasal, malar, and superior maxillary bones.

Communications and Cases.

"I have not willingly, wittingly, or wilfully shut the door against any worthy person, nor shall my prejudice (the porter in this kind) exclude any out of my book, who bring merit for their admission."—*Fuller's Worthies.*

THE USE OF CAMPHOR IN GLANDERS.

By Mr. W. GARLAND, *of Doncaster.*

A GLANDERED horse, seven years old, in good condition, belonging to Mr. Marsh, of Deneby, was admitted into my infirmary on the 12th of April.

Symptoms.—Offensive discharge from the near nostril in large quantities, and very thick. The Schneiderian membrane slightly ulcerated and much discoloured. The sub-maxillary gland swollen.

From the many successful cases of chronic cough, with discharge from the nostrils, which I have treated with camphor, I was induced to try it in glanders. I gave it in doses of one ounce every day, until the 18th, when the discharge entirely ceased. I syringed the nostril with a strong solution of alum every day, which had a good effect on the ulcerated part of the membrane, and caused the horse to blow out much of the mucus. I fed him on Swedish turnips and hay, with half a peck of oats per day; but he became so rapidly emaciated, that I was compelled to change the medicine. I then gave him two drachms of sulphate of copper every day (the same diet) until the 11th of May, when he was discharged, perfectly cured. He has been working since that time, and continues to do well. Two horses had been destroyed for glanders out of the same stable a little time before.

PARALYSIS IN LAMBS.

[*By the same.*]

THREE lambs, the property of R. Grayham, Esq. Bridge Hall, Doncaster, were dropped on the 23rd of March, without any assistance. In each there was a complete loss of motion on the left side. They lay quietly on the affected side, but when lifted up and thrown on the opposite side their struggles were incessant. I recommended that they should be bathed in warm water for a quarter of an hour every day. This was of con-

siderable benefit; and in a few days they were enabled to stand: at the expiration of a week we ceased to bathe them, when they became rapidly worse than before, and were killed. They kept their condition during the whole of the disease. Since this, more of the same flock (lambs two months old), have been attacked with a similar affection.

This disease is not congenital, as the language of our friend, Mr. Garland, would lead us to suppose. It is the consequence of the ewes and lambs being too much exposed in severe weather. When a weakly lamb is just dropped, and passing from the temperature of the uterus to some degrees, possibly, below the freezing point, and unable at first to use his limbs, if he lies for an hour on a bed of snow, or on the wet ground, in a cold, bleak situation, he is seized with this complaint. It is a combination of rheumatism and palsy, occasionally affecting, as Mr. Garland describes, only one side, at other times, the whole frame.

Breeders are not sufficiently careful of their ewes at yeaning time. Even a warm quick hedge in a field would considerably lessen the mortality among the lambs; but a shed, even of the rudest construction, composed of faggots and hop-poles only, and that can again be taken down when the lambing season is over, would more than trebly pay its expense.

We know no remedy for this disease but warmth. The warmth of any closed place will often be sufficient. If the lamb be perfectly helpless, it may be put into a hamper or box, and covered with some coarse woollen substance. It should also be fed with warm milk ten or a dozen times a day. As soon as the lamb is able to toddle a little about, it may be returned to its mother, or placed in some dry and sheltered situation. If purging accompany the paralysis, a little sheep's cordial may be used; but, otherwise, medicine is of little avail. The best formula we know for this empirical, but very useful medicine, is the following:—

Prepared chalk	one pound
Powdered catechu	half a pound
Powdered ginger	a quarter of a pound
Laudanum and peppermint water	each a pint.

EDIT.

RUPTURE OF THE DIAPHRAGM.

To the Editor of The Veterinarian.

SIR,

SINCE I sent you the cases of Ruptured Diaphragm, I have met with another : the particulars are subjoined.

I have also been informed by a neighbouring veterinary surgeon, that he has met with several cases ; and am induced to think it a not unfrequent occurrence.

I remain your humble Servant,

W. A. CARTWRIGHT.

Whitchurch (Salop)
18 *June*, 1828.

ABOUT nine o'clock on Thursday night, 29th May, 1828, a mare, big with foal, the property of Joseph Hassell, Esq. of this town, was seen in her pasture apparently well. The following morning about five o'clock she was found dead.

Examination.—Abdomen enormously distended with food and flatus. About two yards of the intestines were protruded through the vagina ; part of the placenta was also protruded, and filled with water.

The foal was a very fine one, and was presenting with its head and knees, the legs being doubled under; but it had not entered the vagina. There was not the slightest protrusion from the anus.

The diaphragm on the left side was ruptured about half a yard in length, in different directions, but principally from the sternum upwards. The edges of the rupture were much more ragged than in the former cases; and the fibres were drawn out of each other to a greater length. The peritoneum covering the diaphragm was very much inflamed, and the parts in the neighbourhood of the rupture were black : two or three quarts of coagulated blood were found in the abdomen.

The sixth rib (about its middle) on the left side had been fractured, but was again united and sound: on the right side, the eighth rib had been fractured, but had perfectly united. The tenth rib on the right side was obliquely fractured, and had begun to knit together at its inferior end ; the upper end was quite loose, and projected into the abdomen.

The *Lungs* on the left side were collapsed, and did not above half fill that cavity; and there was considerable adhesion to the intercostal pleuræ on their anterior inferior surface. There

were no air-bladders on any part of the lungs, but in almost every part they (especially their anterior parts) were very emphysematous, light, and very white; and on pressing a portion of it, it would burst with a report like a bladder filled with air.

The bronchial tubes, on being cut into, were harder than I had ever seen them; and every ring, even to the very surface of the lungs, was quite sharp, like spiculæ of bone, and could easily be dissected from the surrounding parenchyma.

The *Fœtus*.—Several pieces of horny matter were floating in the water of the amnion, but none in the stomach (*Vide* VETERINARIAN, Vol. I, page 84); the latter had a fluid in it like whey, which I have always observed in the fœtus in utero.

The *Colon* and *Rectum* were filled with fæces of a dark green colour, hard and in lumps; and the colon was much inflamed and diseased. The fæces in the other intestines were of a deep green colour, and of the consistence of cold jelly, but not in lumps.

Observations.—This mare was badly broken-winded, and had been so for many years; and the only thing observable on dissection, in reference to that disease, were emphysema and partial ossification of the rings of the bronchiæ. What was the cause of the rupture of the diaphragm, and when it was done, are questions not easily answered; but I am inclined to attribute it to the immense distension of the abdomen, formed by flatus, food, and the fœtus; for, on opening the abdomen, the stomach was found pressed into the left cavity of the chest; and if the lungs on the left side were so emphysematous as not to perform their functions, and consequently not pressing so hard against the diaphragm, they did not counteract the pressure on the abdominal side, and, the diaphragm being partially diseased at the time, rupture was produced.

We differ from Mr. Cartwright as to the cause of this rupture of the diaphragm. It was evidently connected with parturition. The action of the diaphragm and intercostal muscles very materially assist in the expulsion of the fœtus; and they who have witnessed the violent efforts of the mother during the labour pains, will not wonder that the diaphragm should occasionally be ruptured, and the ribs broken.

The history of human parturition furnishes us with several instances of each; and we are obliged to Mr. Cartwright for sending us the only case, we believe, on record, of the occurrence of this accident in the quadruped. In this mare the

uterus was ruptured as well as the diaphragm; and if she had been bred from before that, the fractures of the ribs might have been caused by the violent action of the intercostal muscles in parturition.

We need not remind our readers, that when they meet with a case of ruptured diaphragm, they are not to take it for granted that it was the cause of death. In the majority of instances it is probably produced by the convulsive struggles of expiring life. It may even occur after death, if the animal be not opened until several hours have elapsed.

The symptoms of ruptured diaphragm are exceedingly obscure. There are none on which the surgeon can depend. This, however, is a matter of little consequence. A considerable rupture is almost necessarily mortal, from its admitting the abdominal viscera into the thoracic cavity, and thus rendering respiration difficult or impossible. When the lesion has been small the abdominal viscera, have insinuated themselves into the aperture, and a fatal hernia has resulted.

EDIT.

DISUNION OF THE LAMINÆ OF THE FOOT.

[*By the same.*]

MR. COLEMAN, I am informed, has asserted that the shoulder of a horse, whilst living, may sooner be pulled from the body, or one limb from another, than the laminæ of the foot can be separated by any force that can be applied; and that it is an utter impossibility to separate them: but the following case is not consistent with that opinion.

CASE.

A pony about 12 hands high, the property of Mr. Franklin, Innkeeper, Oswestry, was put into a small cart to be broken for draught. Something frightening him, he ran away, and came in contact with a waggon that was going along the road; his fore-foot was wedged under one of the wheels, and in trying to extricate himself, he pulled his foot (with the exception of about half an inch of the anterior part of the coffin bone) clean out of the hoof, and which was as clearly separated as if it had been macerated in water. His foot bled a great deal, and the coffin bone was fractured into three pieces. He was destroyed.

SUPERPURGATION FROM THE FARINA OF THE CROTON SEED.

[*By the same.*]

On Friday, 9th May, 1828, I was sent for to a pony three years old, and 12 or 13 hands high, that had an inflamed eye. The next morning I ordered a goulard lotion for the eye, and gave it 25 grains of the farina of the croton seed.

11th.—Eye better, and physick operating.

12th and 13th.—Physick still operating. Lies down occasionally, and appears very dull: legs and ears rather cold.

14th.—Physick not set. Ordered to have oatmeal gruel, and in the course of the day he drank and was drenched with a considerable quantity of thick arrowroot, starch, and gruel: pulse varying from 60 to 70. Towards night he appeared to be better; his extremities were warmer, his pulse more natural, and his bowels ceasing to rumble: at 11 P.M. he began to purge again, and became rapidly weak.

15th.—1 A.M. I gave him ℥ss tinct. opii. in some gruel. In a few minutes after he leaned forwards, propped his head against the manger, and continued to press his head with so much force against the wall, that two men could scarcely hold him back. He appeared quite insensible, and would have fallen had he not been supported by the wall. The pulse continued to vary between 60 and 70, and his breathing was very little affected. He grated his teeth, and his jaws were partially locked. Two pounds of blood were then taken from him; and, in a quarter of an hour, he fell down, and, lay still a short time, when he suddenly sprang up, and appeared better. ℥j spts. vini. were then given in some gruel, after which he became very drowsy. Towards three o'clock he was much better, and I almost hoped he would do well; but purging came on again at intervals during the day, and at five o'clock in the afternoon he lay down, never to rise more. He struggled slightly at times, and appeared in some little pain, and died about seven o'clock.

Dissection.—The colon was studded over, rather thickly, with ulcerated spots, of the size of small peas, similar to those places where bots have adhered to the stomach. A patch (six or seven inches square) of the colon was abraded, and the mucous membrane partially destroyed. The cœcum had ulcerated spots on it like those on the colon, but not so numerous; nor was any of its surface abraded. The other intestines were perfectly sound. One lobe of the lungs was inflamed, and completely gorged with blood.

The Editor of "THE VETERINARIAN" gave, in the early part of this spring, a scruple of the farina of the croton seed to a horse, on whom six drachms of aloes, administered two days before, had not operated. The animal died from superpurgation. To another horse, to whom it was almost impossible to administer a ball, the same quantity was given in a mash. It purged briskly; but the patient underwent a severe salivation.

Edit.

ON ANEURISM OF THE AORTA IN THE HORSE.

By T.

NONE of our veterinary writers have given us any account of the symptoms and progress of aneurism of the aorta in the horse.

Mr. Blaine accidentally saw a case of rupture of the anterior aorta. The horse was proceeding slowly, and apparently in perfect health, and suddenly dropped and died. Mr. Percivall describes a specimen of aneurism of the thoracic aorta; but nothing was known of the previous history of the animal.

A true aneurism is a dilatation of an artery, either in a small part of its course, and then called a circumscribed true aneurism, or for a considerable length, and then termed a diffused true aneurism.

These dilatations are confined principally to the pulmonary, the cœliac, and the mesenteric arteries; and mostly, in old subjects, the coats of the artery are unnaturally thin.

A false aneurism has been said to be when the blood has escaped from a wound in the artery into the surrounding cellular substance. A cyst is then formed, constituting a circumscribed tumour.

I would rather say that the false aneurism either surrounds the artery, and communicates with it during its whole extent, or is attached to one of its sides, generally the inferior face, and sometimes merely by a pedicle at the point where the aneurismal pouch opens into the cavity of the artery. These pouches or tumours usually appear to be formed by an extraordinary distension of all the tunics of the artery. Instead of being ruptured by the pressure of the blood, they yield to an inconceivable extent. But these coats, although distinctly to be traced, have generally undergone much alteration. The middle coat is converted into an osseous substance, which is covered

by a white fibrous tunic (the cellular coat), and the interior membrane is coriaceous, often covered with fungous irregularities, and even ulcerations.

These pouches, or distensions of the arterial tunics, generally contain a fibrous concretion, either adhering to or detached from the aneurismal sac, sometimes of considerable consistence, and even disposed in layers. These clots are softer towards the place where the sac communicates with the arterial cavity, and sometimes the blood is there unchanged. Aneurisms of this kind are principally found on the posterior aorta, and the anterior mesenteric.

It may not be uninteresting to collect what foreign authors have said of this disease.

M. Chouard (*Journal Pratique, Sept.* 1826) relates two cases of aneurism. A mare was brought to him with fistulous withers. He observed that she could scarcely drag her hinder legs after her. The pulse was quick and hard, and the beating of the heart could be distinctly heard. As soon as she entered the stable she fell on her haunches, and never rose again. She was physicked and bled, but on the sixth day she died.

The internal coat of the aorta was highly inflamed; and immediately behind the renal artery was a true circumscribed aneurism, as large as a pullet's egg. A little below was an opening in the artery, which prolonged itself in the form of a pedicle, and communicated with another tumour, as large as a child's head, filled with fibrous matter, in the form of plates. A clot of the same nature, but of less consistence, filled the artery posterior to the dilatation. The spinal canal being laid open, the membranes which enveloped the spinal chord in the lumbar region were highly injected, and the medullary substance was soft, and without consistence, and surrounded by a serous fluid.

Another mare, usually full of spirit and ready for work, suddenly, and without any apparent cause, became dull and incapable of exertion. This continued during three or four months, when the attention of the veterinary surgeon was directed to the loins. She turned with difficulty; shrunk when pressure was made on the lumbar region; was costive; and voided her urine and dung with straining and pain. She was treated as for nephritis, and became better; but, after a very short journey, every distressing symptom returned.

Two months after this her hinder legs swelled, and several ulcers appeared, from which proceeded a considerable serous and bloody discharge. The swelling soon subsided, and the ulcers healed; but on being led out for gentle exercise, she was

seized with cramp in the near hind leg, and which lasted a quarter of an hour. Two months elapsed before she was considered capable of work. She then went one journey well; but had not gone 100 paces on her second journey, when she suddenly lost the use of all her limbs. She fell on her off side, uttering the most dreadful cries: her fore legs were in violent convulsive action; the sweat running from her, and the pupils contracted and fixed. A copious bleeding soon calmed her. Her cries became only occasional. She raised herself on her fore legs: the hind ones were powerless, but acutely sensible. She continued in this state two days, when her cries again became continual, and she died.

The stomach and intestines were in their natural state. The liver much enlarged and easily torn; and the kidneys, likewise, enlarged and inflamed. The posterior aorta, at the root of the renal artery, was dilated to double its ordinary calibre, and a tumour, osseous above and cartilaginous below, communicated with the aorta by an aperture as large as a nut, the edges of which were exceedingly thin. The aneurism terminated abruptly near the origin of the crural artery. The internal coat was ulcerated where the ossific process had taken place, and a fibrous clot completely filled the dilatation and the posterior divisions of the aorta, and extended even to the origin of the renal arteries.

The membranes of the spinal canal were highly inflamed, particularly about the lumbar region. The chord itself was, in that part, not of its usual consistence, covered with little spots of blood, and surrounded by a bloody effusion.

Aneurism existed in both these cases; but I have considerable doubt whether the symptoms that occurred were attributable to that aneurism, or indicated its existence. I should be more inclined to ascribe them to the inflammation of the membranes of the spinal chord, and the spinal chord itself at the lumbar region.

The next account of aneurism is given by M. Vatel, clinical professor at the veterinary school at Alfort.

A mare had been brought for quittor. The foot had been opened, and the caustic applied; and she was, a few days afterwards, brought out for a second operation, when she suddenly staggered and fell. The nostrils were dilated, she heaved violently at the flanks, the limbs were strongly convulsed, and the eyes were retracted, yet rolled frightfully.

The jugular was promptly opened, but she bled not. She was presently dead.

The lungs and intestines were sound, but the pericardium

was distended with blood. It was coagulated, and had adapted itself to the shape of the heart, so as to present the exact appearance of hypertrophy of the heart. A small rupture was found at the base of the trunk of the aorta, which was evidently owing to the remarkable thinness of the parietes of the artery at that spot. On opening the ventricular cavity, only one of the columns which traverse it from side to side was found, and that was as large as a quill, and entirely muscular.

M. Vatel remarks, that this case is principally valuable, because the mare did not, during life, exhibit a single symptom which could indicate the existence of the aneurism.

M. Rigot, anatomical professor at Alfort (Journal de Med. Vet. July 1827), says, that an old horse was bled to death at Alfort. On dissecting him a false aneurism of the aorta and anterior mesenteric artery was found. It was eight inches long and four wide, the parietes were bony, and it contained a fibrous clot of considerable consistence. There seemed to be in this horse an aneurismal diathesis; for the pulmonary artery was evidently dilated, and likewise the carotids at the point of their division into three branches. There was no symptom in the living animal by which the existence of the aneurism could have been indicated.

Of the cause of these aneurisms we can say but little. Something may be attributed to the thickness and power of the parietes of the left ventricle; the curved direction of the arteries; their proximity to the heart sustaining the whole force of the rush of the blood; the inequality between the capacity of the large arteries, and the strength of their coats; any sudden increase of the arterial circulation; undue or long continued muscular efforts, and many other circumstances which will immediately occur to the reader.

It would appear, on the whole, that no symptoms will indicate the existence of aneurism; or, should the aneurism be suspected, no medical treatment will remove it. If surgeons will carefully attend to the post-mortem appearances in cases of sudden death, aneurism of the aorta may be found of more frequent occurrence than is imagined.

THE VETERINARIAN, JULY, 1828.

"Licet omnibus, licet etiam mihi, dignitatem *artis veterinariæ* tueri."
Cicero.

WE resume our account of the annual meeting of subscribers to the Royal Veterinary College, held on the 28th May last.

It having been determined that application should be made to the Committee of Examiners, to ascertain their feeling as to the admission of veterinary surgeons among them; the report of the Committee appointed to consider the propriety of erecting an operating room was received. They had obtained the estimates of various builders, but the calculated expense was so great, that they had, for the present, abandoned the project.

Mr. Joseph Goodwin and Mr. Coleman now addressed the meeting, and stated, that, in their opinion, an operating room was much wanted, and, in fact, indispensable; and the matter was again referred to the same committee. We trust that these gentlemen will not think two or three hundred pounds ill bestowed in enabling the students to become better instructed in this most important branch of their profession. The whole system of operations at the college needs reform. The pupils are never called on to perform the principal ones, in the presence of the sub-professor, as undoubtedly they ought to be; and the operations of that gentleman are performed in a place where it is impossible for any student to see the whole, or for many to see even a part of one of them; while the crowding and jostling of the young men, in order to obtain even a momentary glimpse, form a scene sometimes ludicrous, always annoying, and not a little disgraceful. We understand that Mr. Sewell was, not long ago, so much inconvenienced by this disorderly conduct (a disorder, however, arising more from necessity and praiseworthy curiosity, than design), that he declared he would never again operate in public. He has, however, operated as before, and will continue to do so; but it is a sad nuisance, that should be remedied.

The application of the dispenser, Mr. Morton, to be permitted to lecture on chemistry and pharmacy in the theatre of the college, had been referred to a committee, and was acceded to, on the condition that he should appear before the medical committee, and undergo the necessary examination as to his knowledge of the principles and operations of chemistry. To that examination he could not object; but, if common report is to be relied on, a physician, well qualified for the undertaking, has offered to lecture *gratuitously* on these subjects at the college theatre during the next session.

Several additions were then made to the list of governors, including the Duke of St. Albans, Lords Skemersdale and Colchester, and Mr. Yates Peel.

The report of the professor was next received, the substance of which was given in the last "VETERINARIAN." 869 horses were received into the infirmary, of which 585 were cured or considerably relieved, and 42 died or were destroyed. We must confess that this report, the accuracy of which we do not question, is far from satisfactory. We require a statement of the diseases under which these animals laboured, and the comparative mortality of the different diseases. We should then be enabled to compare the success of the college practice with that of other surgeons, and be considerably and beneficially guided in our treatment of various maladies. If another report be permitted to come before the public (a word or two concerning this by and bye), we trust that it will be a little more like that which is given by other veterinary schools, and by the medical officers of every hospital and dispensary.

It was also the opinion of the governors that a detailed statement of interesting or unusual cases should, in future, accompany this report, and which, or selections from which, should be published, at their discretion. The necessity of this has long been acknowledged, and we trust that neither the professor nor the governors will forget to gratify the expectation of the profession and the public.

A subscriber now asked whether Mr. Sewell had not received a present of one hundred guineas from the governors for his discovery of a cure for glanders. The original document

was produced, in which not one word appeared respecting the *actual cure;* but this sum was voted, and we think very properly, as a partial reimbursement of the very considerable expense which he had incurred in the zealous prosecution of his experiments on glanders. How the other version of the story became so current among the profession and the public we presume not to enquire.

The financial report was now read, but so rapidly that we were unable to follow the secretary. We were the less anxious about this, as we knew that every subscriber had free access to the books of the college, and we should be able to extract the report at our leisure. On application, however, to the clerk, a few days afterward, we were told that the time was past, and that the accounts were open to the inspection of the subscribers during the week only preceding the audit.

On further enquiry we learned that this was a new regulation of the governors, and that it had not received the sanction of any general meeting; yet it was rigorously enforced, and we were refused the information we desired.

We do not mean to question the propriety of this restriction. We are rather disposed to approve of it. We can conceive of many circumstances of inconvenience and annoyance if every subscriber might, as often and as long as he please, occupy the time of the clerk by turning over, and extracting from or copying, a multiplicity of documents. But we a little complain that the governors should thus abridge the privileges of the subscribers without giving them notice of that abridgement; and that they should rigidly enforce this restriction before it was confirmed by a general meeting. We think, too, that when the purpose for which we required this information was stated to the secretary, and well known by him, and considering that we were misled by ignorance of a restriction the existence of which we could not possibly have divined, a little courtesy might have been shown to us. We will not, however, quarrel about this; but will proceed to give the financial report, as well as we can, from memory, not being answerable for any inaccuracy.

£2712 had been received on the infirmary account.
£2574 had been expended in salaries, provender, &c. leaving
——— a balance of
£147 in favour of the institution.

By the sale of drugs £65 had been gained; and £7 lost by the forge. The subscriptions had amounted to £1756; and the number of actual subscribers exceeded 800. £1094 remained in the hands of the bankers, and £4036 stood in the name of proper trustees in the 4 per cent. consols. The actual profit of the Company during the last year (for it is, what it should long ago have ceased to be, a joint stock speculation) we cannot state. Rapidly as the secretary read we could not collect what the expenditure of the £2574 included.

We would hint to the governors the propriety, in justice to themselves and to the college, of publishing, or, at least, distributing among the subscribers, an annual report of the finances and transactions of the institution.

A long, and irregular, and very unpleasant altercation now ensued respecting a correspondence between the secretary and Mr. Cherry. Mr. Cherry complained that he had been neglected and insulted by Mr. Sewell, and Mr. Sewell produced a letter from Mr. Cherry couched in no very gentle terms. Mr. Cherry then threw on the table the whole correspondence, which the chairman very properly would not read; and although, perhaps, a little more of the suaviter in modo might have accompanied the rebuke, he did perfectly right in peremptorily forbidding the continuance of a dispute which could lead to no possible good result.

One important piece of information was elicited from the chairman, Mr. Cherry's ignorance or forgetfulness of which might possibly have led to the misunderstanding between him and the secretary,—that all memorials, communications, complaints, &c. were to be addressed to the governors, enclosed in a letter to the secretary, requesting him to lay them before the proper committee.

A gratuity of 20 guineas was then voted to the head groom.

An application was then read from Mr. Morton, the clerk and dispenser, requesting larger and more suitable apartments. A

momentary misconception now arose, which was speedily rectified; but an inaccurate and false account of which having found its way elsewhere, we deem it an act of justice to a deserving officer to relate the circumstance as it happened.

When presenting his report, Mr. Coleman had complained that certain cases had been *stolen* from the college records, and brought before the public to effect a malicious purpose. As soon as Mr. Morton's name was mentioned, in connexion with his application, the chairman demanded whether he was concerned in this robbery. Both Messrs. Coleman and Sewell promptly and unhesitatingly acquitted him of all participation in the affair, and bore ample testimony to his fidelity and good conduct. The book containing this record of cases lay in his office, open to the inspection of the pupils, and by one of these pupils the obnoxious selections were made. No blame could, by possibility, attach to Mr. Morton.

It was now five o'clock, and the further consideration of Mr. Morton's application was adjourned; not that there was the slightest doubt of his honourable conduct, but because the chairman was engaged to dine in the city, and some of the governors pleaded similar engagements. Therefore, after the fatigue of nearly two hours and a half's close attention to the business of the college, and that occurring so often as once or twice in the year, and the expression of much self-complacency for this wondrous exertion of body and mind, the chairman suddenly rose, and declared the meeting adjourned until a future day.

On the 14th of June the subscribers (three beside the governors) met again.

Mr. Behrens reported the result of the interview of the governors with the examining committee. The conference was held at Sir Astley Cooper's residence. The examiners present were Sir Astley Cooper, Drs. Babington and George Pearson, and Messrs. Charles Bell, Brodie, Green, Coleman, and Sewell.

The governors stated to the examiners their perfect satisfaction with the exertions of the medical committee. They considered that committee fully competent to decide on the acquirements and merit of the pupils. They had no desire to

introduce the slightest change; but if the examining committee thought it advisable, and wished that a certain number of veterinary surgeons should be added to them, they (the governors) were willing to accede.

Now, here we must beg leave to remind the spokesman of the governors, that he somewhat misunderstood, and did not obey, his instructions. It was the avowed opinion of the chairman, and of Mr. Coleman, and of the general meeting of the 28th of May, that the profession would be benefitted by the union of some veterinary surgeons with the present examining committee. This also had been the declared opinion of the meeting of the former year; but the matter had not been more strongly urged, from the belief of the governors and subscribers, although they had no *official* proof of it, that this amalgamation would be unpleasant to the old committee. Mr. Coleman acknowledged that this feeling did exist; but he hoped that the strongly expressed opinion of the general meeting might induce the examiners to receive among them one or more veterinarians. It was to ascertain the real feeling of the examiners, or the extent of their objection, that the governors were deputed to confer with them. The spokesman in this conference says not a word of this avowed opinion of the general meeting; nay, he denies that this opinion had been expressed; he says, that they had no desire to introduce the slightest change; but that *if the examining committee thought it advisable, and wished that a certain number of veterinary surgeons should be added to them, they (the governors) were willing to accede.*

This is a perfectly different view of the case; and we acknowledge ourselves not a little surprised that gentlemen so quick of apprehension in other affairs, should so egregiously err.

We do not, we cannot suppose that they would play a double part. They would not "palter with us in a double sense." The whole was not a farce got up for the occasion; but, most undoubtedly, the instructions of the general meeting were not obeyed.

We pledge ourselves to the examining committee that it was the avowed opinion of Mr. Coleman, the avowed opinion

of the chairman of the general meeting of subscribers, the avowed opinion of that meeting generally, the deliberate opinion and the firm demand of every veterinary surgeon,—a demand which we will not cease to urge until common sense, and propriety, and justice shall concede it to us,—that in England, as in every other country, veterinary surgeons shall form a portion, at least, of that committee which is to decide on the competency of the veterinary pupil.

We have not room to urge this matter now. The subject shall be shortly resumed. We will only say, at present, that, deeply lamenting some of the occurrences of the preceding month, we can imagine what impression they may have made on the minds of gentlemen long devoted to the tranquil pursuit of truth, and who had lived, and wished to live, in amity with their brethren. We can easily imagine how much they might fear to admit among them, by possibility, any fiery spirits, before whose destructive influence friendship and the pure love of science might speedily wither and die. They must not, however, judge of all of us by the indiscreet zeal or rude behaviour of a few; and if they will condescend to attend the meetings of the Veterinary Medical Society in the ensuing winter (and they will be invited so to do), they will, perhaps, perceive that they have not done us justice. Although inferior to them in many attainments, they will find us united by friendly and honourable feeling, and by the ardent love of our profession; and not ill calculated to become useful, nay, indispensable coadjutors in the work which should be ours, but from which they have at present excluded us.

To return.—Dr. Babington and Sir Astley Cooper delivered their opinions at considerable length against the addition of any veterinary surgeons to their committee; and it was decided (we were not told whether unanimously or by what majority) that "a law of the Royal Veterinary College limits the examining committee to those who deliver, or who have delivered, lectures on subjects connected with the veterinary art; and the committee do not consider that any alteration of this law is at present necessary."

The report of the governors being read, it was moved and

carried,—That this meeting, having received the report of the committee of governors, do approve of the same, and do coincide with the opinion given by the medical examining committee.

A desultory and rather irregular conversation then ensued, in which it was unguardedly asserted by one of the governors, that the books of the institution were not kept for the information of the subscribers, but of the governors only. We cannot think that he was aware of all that was implied in this, or the conclusions which would be necessarily drawn from it, or the character which such a committee of governors would assume, or the advantage which he gave to the enemies of the institution.

The same gentleman afterwards intimated that he should move, in the proper committee of governors, that no veterinary surgeon should hereafter be permitted to become a subscriber to the college. Surely this gentleman could not have reflected on the injustice of such an act, the direct and palpable insult which it would offer to the profession, and the injury to the institution which would necessarily accrue. We think he will pause ere he carry his threat into execution. We would advise him to do so. The veterinary surgeon must be the person best qualified to decide whether the veterinary college be well or ill conducted; and if they who are best qualified, who, perhaps, alone are qualified to come to a just conclusion, are excluded, the public will believe that there is something which will not bear the light. We would entreat this gentleman, we would entreat the committee of governors, to pause ere by such an arbitrary enactment they bring suspicion on the management of the institution, and array the whole body of veterinary professors in indignant hostility against them.

The veterinary surgeon, generally speaking, loves the institution at which he imbibed the knowledge of his profession. Many pleasing recollections of days never to return are associated with it. He identifies himself with its reputation and prosperity; and as long as human nature is true to itself, and the veterinary college is well conducted, the well-informed and liberal veterinarian will be its truest friend. Why is he to be excluded? Because he may be treacherous and dishonourable?

He repels the charge with indignation. If you exclude him, it is because you fear him; and you can never be afraid of him unless there is "something rotten in the state of Denmark." Exclude the veterinary surgeon from the little interference with the government of the college which his limited privileges as a subscriber give him! Ridiculous and absurd!

A little before the close of the meeting Mr. Hart mentioned that some of the pupils were accustomed improperly to receive fees for the examination of horses in the absence of the professors, and likewise for attendance on private practice out of the college. We trust that, in justice to the pupils and the professors, he will, at the proper time, bring forward the proofs of these accusations, which he asserted he had in his possession.

This led to a conversation as to the extent to which the professors should be permitted to engage in private practice. If the horses of subscribers cannot be removed from the stables of their owners, the professors, or the assistant demonstrator, or pupils duly qualified, may be permitted to attend them, and are then entitled to the usual visiting fee. It is better, however, that they should do what Mr. Coleman stated they were in the habit of doing, recommend that the case be given to some neighbouring veterinary surgeon; for the professors of the college have enough to do properly to attend to the horses in their own infirmary. On the horses of non-subscribers no person from the college should be permitted to practise. As consulting surgeons, however, they are in their proper situation. They are the judges best qualified to decide, the preceptors best calculated to direct, in difficult cases; and then, if honour were banished from the rest of the *profession*, it would be found in the breasts of the *professors*. It would, surely, never be said, at least it never ought to be said, if you apply to the college you lose your employer. This is bad and despicable policy.

But we are transgressing all bounds, and must proceed to another subject.

We have now the painful task of reporting the result of the adjourned meeting of the Veterinary Medical Society on the 10th of the last month.

Twenty-five veterinarians assembled, and some of them from distant parts of the kingdom, to consolidate and establish this new and promising institution. A few amendments were made in the proposed laws and regulations, and the meeting then proceeded to "elect the proper officers."

While it had been the conviction of the originators of the society that much good must result to the profession from the establishment of a more frequent and friendly intercourse between its members, and the free discussion of every subject connected with veterinary science, it must have been evident that these objects could only be obtained by excluding, as far as possible, all party spirit.

It was too well known to every veterinarian that much private pique and rancorous feeling existed among some of our members. It was the object of the majority, at least, of the originators of this society, to terminate these disgraceful and injurious feuds, and to unite, if it could be effected, all parties in the pursuit of truth. How was this to be accomplished? One thing was plain enough,—that the society must not, at its very commencement, assume a party character.

Common courtesy required that the professor of the veterinary college should be, or should be solicited to become, the honorary president of the veterinary medical society. It was a compliment evidently due to the situation he held among us. If an inferior surgeon was appointed, it was declaring, too plainly to be misunderstood, that the professor was not deemed worthy to preside over this society. It was condemning him untried and unheard, and passing on him the severest censure which his most malignant enemies could desire. It was at once to characterize the society as hostile to the professor; depriving it of the co-operation of every friend of his, and necessarily generating a spirit destructive to friendly intercourse and valuable improvement.

Common courtesy, we say, demanded that the professor of the veterinary college should be solicited to become president of the veterinary medical society. The office was *honorary*. The appointment of four vice-presidents to act in rotation sufficiently indicated this. It was an office complimentary to

the individual, and, at the same time, intended to increase the respectability and importance of the institution. It gave no patronage; it bestowed no power; it implied no dereliction of principle in a single member—no avowed support of negligence or of error; it was simply *a matter of courtesy, and a determination to avoid even the appearance of party.*

The election of honorary president came on first.

The 14th law declared that he should be elected by *ballot.* The secretary, therefore, gave to each gentleman a slip of paper, on which he might write what name he pleased. This was the usual and fair proceeding. On the examination of the papers by the president, it would appear whom the members, or the majority of them, wished to compliment with the post of honour.

This course, however, was vehemently objected to, and the terms, underhand, foisting, packing, trickery, were unsparingly applied. The truth was, that, no particular person being proposed, some gentlemen were deprived of the opportunity of indulging in a long train of invective and abuse against Mr. Coleman.

Mr. W. Goodwin indignantly cut this matter short, by proposing that Mr. Coleman should be solicited to become the honorary president of the veterinary medical society.

The old story of the culprit at the halberds was immediately verified. Dissension and uproar were increased to a ten-fold degree. The epithets of humbug and swindling were applied by one individual to the motion or the mover, or both; and another person, who had declared that "he would stick to Mr. Coleman, and would not rest until he had hurled him from the situation which he unworthily filled," started from his seat and said, that if there were any supposed impropriety in the use of these terms, he begged to share in the full responsibility.

The objections to Mr. W. Goodwin's motion seemed to rank under two heads. The first was, the supposed delinquency of Mr. Coleman as it regarded the education of the pupil and the respectability of the profession. It was replied that this was not the court for the determination of such matters; that Mr. Coleman *was* professor; and the only questions for us to consider were, whether common courtesy did not demand that the

office of honorary president should be offered to the head of our profession; and whether we should not establish an avowed party society by selecting any other gentleman.

The second objection was, that Mr. Coleman was not a member of the society, and therefore could not be president of it. Were gentlemen really so ignorant of the constitution of every society as not to know that, in nineteen cases out of twenty, application is made to some nobleman or member of the royal family to accept of a similar office, who was not at the time, and otherwise never would have been a member of the institution. The question of membership is never mooted. The object is to increase the respectability, and secure the purposes of the society. When the nobleman has accepted of the proposed office, he qualifies himself to fulfil it, by becoming a member.

It was repeatedly asked, where was the law which, contrary to the usages of all other societies, declared that a person must be a *member* of our's before he could be nominated as honorary president?

After a stormy debate the motion was put to the vote. The numbers on either side were equal, and to our surprise and deep regret, the chairman gave the casting vote against the application to Mr. Coleman.

Mr. J. Percivall was then proposed, who declined the intended honour.

Mr. Joseph Goodwin was next nominated, when it was moved as an amendment, and carried (all disrespect to Mr. Goodwin being disavowed), that, considering the excited state of feeling which then prevailed in the meeting, the election of honorary president should be postponed until the 17th of June. Another gentleman then moved an adjournment of the whole of the remaining business. This was carried by a very considerable majority.

Considerable clamour now arose with regard to the subscriptions which had been collected. No officer had been appointed with whom the money might be deposited. Many members observed, that surely it was safe in the hands of the secretary *pro temp.* Others were "not so sure of that."

The secretary then indignantly refused to take charge of it. He offered it to the chairman of the latter part of the evening, and then to the son of the first chairman; and when, on their refusal to receive it, the money was left on his table, he got rid of it as quickly as he could by returning to every gentleman his subscription.

Thus ended the first general meeting of veterinary surgeons; and by these last acts, and the non-appointment of any officer, the Veterinary Society (for this name it had assumed, the term *medical* being dropped) was virtually broken up.

It was, indeed, sufficiently evident, that a society commencing in dissension, and in which good manners and good feelings were so early and so flagrantly violated, could not possibly lead to friendly intercourse, or promote the improvement of the art; and the majority of those who had attended the first two meetings determined no longer to engage in a contest painful to themselves and injurious to the profession; but they would not abandon a purpose which promised so fairly to accomplish the ardent wishes of every friend of the profession, nor permit the cause of veterinary science to be sacrificed to the inconsiderate violence of a few of their brethren. They would not, however, do any thing in haste or in anger, but awaited the result of the adjourned meeting of the Veterinary Society (if such should be held) ere they took any decisive steps.

On the 17th of June this meeting was held. It was attended by the Messrs. Cherry, father and two sons, Messrs. Charles Clark, Hart, and Rogers, a minority of precisely one-fourth of the original number. Two veterinary surgeons afterwards dropped in, but who were not friendly to the proceedings of this minority. These six gentlemen, however, determined to proceed in establishing a veterinary society, and, abandoning the appointed place of meeting, adjourned to Little Windmill Street.

Of the nine gentlemen who had united in framing the laws and regulations which were submitted to the general assembly, viz. Messrs. Cherry, Rogers, John Field, jun., W. Goodwin, Henderson, John Percivall, W. Percivall, James Turner, and Youatt, the seven latter remained. Their names are not unknown to their brethren, and are a sufficient guarantee for the propriety of the motives by which they are actuated.

On the evening of the 21st of June they assembled in their old place of meeting, and re-formed themselves into the *Veterinary Medical Society*, in which they are resolved that party spirit shall never find a place; and which shall be honestly devoted to the pursuit of science, the improvement of their art, and the promotion of friendly intercourse.

This meeting was adjourned to Wednesday the 25th of June, more fully to consider the laws and regulations which, under the present circumstances of their profession, may be necessary; and to receive the names of those gentlemen who attended the meeting of the 10th of June, or of any of their brethren who enter cordially into their views, and are desirous to unite with them in maintaining the respectability, and effecting the best interests, of their profession.

We make no comment on this simple detail of facts. It speaks sufficiently for itself.

Review.

" Let me suppose you have surmounted the teasing employments of printing and publishing, how will you be able to lull the critics; who, like Cerberus, are posted at the avenues of literature, and who settle the merits of every new performance?"—*Goldsmith.*

A TREATISE ON INGUINAL HERNIÆ IN THE HORSE AND OTHER MONODACTYLES.

By GIRARD, *Director of the Royal Veterinary School at Alfort.* 4to, pp. 145, *with Lithographic Plates. Paris*, 1827.

HERNIA is the technical appellation for that which in common colloquy we call " rupture," and consists in the escape or displacement of some viscus, commonly intestine, from the cavity of the belly, most frequently either into the groin, or through the groin into the scrotum; hence the common epithet *inguinal.* There are, however, as we shall hereafter point out, other situations in which such prolapsus may occur. In Great Britain and Ireland, hernia is rare in its occurrence, compared with the accounts we have of its prevalence among the horses of other countries, as France, Germany, India, Arabia, &c.; a fact that serves not only to throw a light on its pathology, but one that

also teaches us, that the practice of castration, on which this difference depends, is a valuable prophylactic against this disease, as well as a subduer of certain violent propensities. Indeed, unless it be in parts of the country where racing is practised, so rarely does hernia present itself, that the subject might appear to some to form a superfluous branch of the veterinarian's education: we trust, however, that on the present occasion, our readers will take a more enlarged and enlightened view of veterinary science; and we assure them that our present investigation will not be regarded to have been pursued in vain, should it prove to be the source of saving even but one horse in a practitioner's lifetime from falling a victim to a dangerous but remediable disease.

The present Treatise was presented in July, 1825, under the title of *Memoirs, &c.* to the Royal Academy of Sciences. It is the result of numerous researches into inguinal herniæ; and is intended as a guide to the operator, pointing out to him that practice which is the most simple as well as the most successful. As a special dissertation on hernia, the work stands alone. The author conceives that he is the first who has elicited any fixed principles on the formation and treatment of this affection; and he ventures to hope that his anatomical and pathological details will serve to establish them.

Herniæ, or ruptures, are serious, frequently mortal occurrences, of which animals are much seldomer the subjects than man; not less on account of the horizontal position of their bodies, than from the disposition of the muscles and fibrous envelopes forming the inferior parietes of the abdomen. In man, the intestinal mass is bearing downward, and particularly upon the inguinal regions, where the openings are situated (the abdominal ring and crural arch), against which it is acting with unremitting pressure. In quadrupeds, on the contrary, in consequence of the oblique inclination forward and downward of the inferior surface of the abdomen from the flank to the sternum, the intestinal mass gravitates against the diaphragm, pushing it forward, and occasionally rupturing it. Furthermore, the particular organization of the muscular parietes of the splanchnic cavity operates against the frequency of inguinal or crural herniæ. On reflecting the skin, first we meet with the panniculus carnosus; then a ligamentous covering corresponding to the fascia superficialis in man, but much more developed, much thicker, and more elastic, and particularly as it approaches the pubes; next, the external oblique muscle; the internal oblique; the rectus; lastly, the fascia transversalis. The resistance offered from the density and peculiar disposition of these coverings, explains why inguinal herniæ are so unfrequent in monodactyles; why other herniæ, such as crural, opturator, and pubic, are unknown; and why lacerations and herniæ of the diaphragm, so rare in man, are so common in herbivorous animals. Another circumstance worthy of notice, inasmuch as it also contributes to restrain inguinal herniæ, is, that the greater proportion of horses become at an early age the subjects of castration; one of the consequences of which is, to contract, more or less, the inguinal canal; *ergo*, the predisposition to hernia of it.

The herniæ commonly occurring in quadrupeds are inguinal, umbilical, diaphragmatic, and ventral. In the present memoir we shall confine our observations to the first kind, and they are to be understood to apply only to herbivorous monodactyles.

M. Girard has arranged his matter under five heads or articles. The FIRST treats of the *Surgical Anatomy of the Parts concerned in Inguinal Hernia;* the SECOND and THIRD, of the *Formation and Distinction of such Herniæ;* the FOURTH, of the *Treatment;* the FIFTH enters into *Considerations on the Jurisprudence applicable to such affections.* We have not room to follow our author through his anatomical details; and even had we, they would prove uninteresting to those already acquainted with the parts; and to others, bare descriptions, without plates or actual dissection, would be found to convey but very imperfect ideas on the subject. The lithographic illustrations presented in the present work show the parts of their natural dimensions, and do no less credit to the ingenious designer than to the artists employed in their execution; and to them we can with confidence refer such of our readers as may require such preparatory information.

I.—OF THE FORMATION AND DISTINCTION OF INGUINAL HERNIÆ.

In man almost every one of the abdominal viscera may protrude through the inguinal canal, and become hernial; in monodactyles, the small intestines, the colon, and the omentum, are the only organs susceptible of such displacement; of these, the small guts, from their loose attachment, their volume, their general inanity, and their energetic contractility, most readily enter the canal, and in consequence constitute the contents of almost all enteroceles. The duplicature or flexures of the colon are the parts next most liable to protrusion, from the circumstance of their peritoneal connexions giving them greater liberty. Concerning the omentum, which is so short that one would conceive it impossible for it to get into the inguinal canal without prior laceration, its protrusion is always the effect of some violent intestinal commotion, and is never productive of much mischief. The question might opportunely be discussed here, whether, of itself, it is possible for the omentum to become hernial; or, whether it is not dragged through the ring by intestines already in that state. The epiploceles resulting from castration would incline us to believe the former practicable.

The most common causes of inguinal hernia are, the commotions excited internally by colic: it may prove the consequence of some sudden effort under the weight of a heavy burden, of rearing on the haunches, kicking, leaping, &c. Whatever tends to the relaxation of the abdominal parietes, or the fibrous tissue of the ring, will conduce to the same effect.

Stallions are the ordinary subjects of this hernia, and especially those in the habit of covering. Hungarian horses rarely have it; and we have never seen it in a mare. It may exist with or without visible tumour, and be acute or chronic, simple or strangulated, continued or intermittent. In some cases there is thickening of the membranes, adhesion of the hernial coats between themselves, and sometimes to the intestine. In other

cases hernia is complicated with hydrocele, the tumour assuming a particular shape, and considerable magnitude. Besides these distinctions, a hernia may be latent, confined to the groin, then called *bubonocele ;* or it may descend into the scrotum, and then takes the name of *oscheocele.* Both may be recent or inveterate, reducible or irreducible.

Enterocele certainly occurs the most frequently. Rarely is it found on both sides at once, oftener taking place on the right; a peculiarity we are unable to explain. Ordinarily it commences as a bubonocele, whose character varies according to the resistance opposed, and to the difficulty the gut has to reascend into the abdomen."

As M. Girard himself observes in a note, the rarity of cases of adhesion between the gut and the hernial coverings may be ascribed to the non-employment of artificial pressure: in man, in whom trusses and bandages are so commonly used, the occurrence is frequent. There is one fact, however, which has lately come to our knowledge, and may be introduced here by way of further illustration; and this is, that it is by no means uncommon in India, where castration is much practised at a late period of life, to find adhesions between the vaginal coverings of the testicles: in these cases it cannot be assumed that pressure is the cause, though the phenomena are very similar.

We are not surprised that M. Girard has made no mention of that which is the common cause of hernia in this country—or, to speak more correctly, has made no allusion to the sudden and violent efforts experienced in racing and hunting, and the special liability of such horses to rupture; a fact of so much importance to us, that these are almost exclusively the subjects of the disease. We repeat, we are not to feel surprise at this apparent omission, because France, it is well known, is a country wherein those sports are little known, or, at least, not practised to the degree of refinement to which they are carried at the present day at Newmarket and elsewhere.

Without meaning to assert, that we have satisfactorily solved M. Girard's gordian knot, we would adduce for consideration the circumstance of horses in general being taught to strike into the canter or gallop with the right leg in advance, a practice that cannot fail, in the course of time, to give them a habit of prancing and making every kind of effort with the right feet, hind as well as fore, so advanced; consequently, we should argue, that the right side of the body was undergoing a greater stretch of exertion at such times than the left, and that this might possibly induce, to a greater degree on that side, that relaxation of the abdominal parietes, which M. Girard affirms to be one of the causes of hernia. We are not certain, however, that our continental neighbours make this a prominent object in equitation; should they not, our reasoning, of course, will not apply.

Extracts from Journals, Foreign and Domestic.

OBSERVATIONS ON HYDROCEPHALUS IN THE HORSE. (STAGGERS).

By M. C. Lessona, *Director of the Royal Veterinary School, Turin; with Annotations, by* J. B. C. Rodet, *Professor of the Royal Veterinary School, Alfort.*

(Continued from p. 126.)

Case II. Is of a similar description and result to the last, excepting a few unimportant particulars:—The disorder lingered for some time, and was at length excited into action by some spreading, untoward, cutaneous ulcerations in the hind extremities, which occasioned spasms and intense suffering. An intermission was obtained; but a sort of stupidity left behind showed that the disease, though suspended, was not subdued. In this state of absence of inflammatory re-action, the owner objecting to my proposal of inserting a seton in the neck, though, after being weary of waiting for spontaneous amendment, he desired me to adopt some decisive measures, willing to take the chance of good or harm resulting from them, I determined on exhibiting an ounce of aloes. It took effect; but the irritation it excited in the alimentary canal so exasperated the cerebral lesion that three days afterwards the animal died.

Examination.—More intense inflammation of the alimentary canal, the consequence of the unseasonable administration of the purge. The brain itself free from signs of inflammation, although its substance was injected with a serous limpid fluid similar to that with which the lateral ventricles and other cerebral cavities were all greatly distended.

Case III. The symptoms, similar at the commencement, assumed afterwards the lethargic character, and ended in furious delirium. There was no local excitant, unless a cutaneous disorder consisting in herpetic incrustations can be so considered. Besides phlebotomy, from the *mammillary* as well as the jugular veins, and clysters, two setons were inserted in the neck, which caused such inflammation that scarifications, fomentation, &c. became necessary.

"Annot. VII. A fresh instance of the danger there is, in these disorders, in applying *derivatives* in the vicinity of the disease, and before any marked remission of the cerebral irritation has been obtained. By derivatives are meant setons or other means producing a fresh irritation, and one that, so far from working a salutary revulsion in the skin, for which purpose such agents are designed, can only serve to

aggravate the malady already existing; being in itself a fresh source of pain, and consequently augmenting that already present, inasmuch as the diseased part naturally responds to pain from other quarters. This sympathy does most certainly exist when the brain is the seat of disease —itself the common and prolific centre, both in health and disease, of all the sensations."

"VIII. Furious delirium, extreme agitation, convulsions and spasms, indicate, generally speaking, in these affections, that the membranes in particular, and above all the arachnoid, are the seat of disease; whilst stupor, coma, collapse, lethargy, muscular debility, &c. belong more especially to those cases in which there is alteration of the proper substance of the brain. In the above case, the alternation of furious delirium and lethargy showed, as was afterwards proved on dissection, that the brain and its membranes were both affected at one time, and that encephalitis, which preceded, became subsequently complicated with arachnoiditis, inasmuch as the symptoms of the latter did not make their appearance until after the manisfestation of those of the former affection."

Examination.—Appearances within the chest and abdomen analogous to those in the preceding cases. Ventricles communicating one with another, and containing about six ounces of limpid fluid.

Case IV. A horse belonging to the royal stables was suddenly attacked, in the summer of 1817, with a very violent irritation of the membranes and brain, having frequent paroxysms of frenzy, alternating with a state of lethargic stupor, of which he died in three days, in spite of repeated blood-lettings, the continual application of cold to the head, and the employment of derivatives. We found traces of chronic inflammation of the intestinal canal, the lungs gorged with blood, and the ventricles containing a very large quantity of limpid serous fluid.

GENERAL CONSIDERATIONS ON HYDROCEPHALUS.

Hydrocephalus, or, more properly, morbid irritation of the brain and its membranes, to which it is pathologically owing, is among horses the most frequent of cerebral disorders. In the acute form, it often gives rise to the affections called phrenzy, and to vertigo, idiopathic or symptomatic, which are confounded with actual inflammation. In the chronic form, it produces sleepiness, coma, lethargy, chronic vertigo, *immobility*, and sometimes also epilepsy. If it be but slight, it shows itself in momentary fits of drowsiness, stupor, and also *phrenzy*.

"IX. In regard to *immobility*, it is not quite certain that it consists in disorder of the brain any more than it is an affection of the spinal marrow or its arachnoid covering."

"X. And in respect to symptoms of agitation or collapse (peruse again Annot. VIII. p. 252) the remarks already made are founded upon facts resulting from observation, and I repeat here, that such symptoms no more belong to the acute than to the chronic form of disease; but that the former, *viz.* those of exaltation, denote that the membranes are

affected; whereas those of annihilation of the functions of voluntary motion and sensation, on the other hand, proclaim the morbid alteration essentially to exist in the substance of the brain itself."

Furthermore, this chronic irritation is the most frequent cause of the vices inherent in certain horses, such as shyness, restiveness, impatience, biting, kicking, *i. e.* without provocation. In fine, it is equally influential in the nervous affections observable in the sense of sight, and principally in amaurosis or gutta serena.

If we except severe lesion and external violence, the causes of morbid super-excitation of the encephalon, either direct or sympathetic, in place of giving rise to cerebral congestion, produce only functional disorder—inordinate vital energy, and that kind and degree of irritation in the membranes which ends in serous effusion, principally into the ventricles.

"XI. We have had occasion before to observe, that this serous exhalation, when moderate, is compatible with the normal state of the parts, and even inseparable from their perfectly healthy condition. It is only in cases wherein it is too abundant, or its quality is deteriorated, that there can be said to exist disease."

This morbid irritation is, doubtless, a pathological condition arising from stimulating causes, and one approaching to phlegmasia; but so long as it is confined to the production of super-excitation, functional disorder, and morbid serous exhalation, it cannot be regarded in the light of confirmed inflammation. As the presence of serosity in the ventricles, although an effect of morbid irritation, becomes the principal cause of the symptoms accompanying, characterizing, and announcing this irritation of the brain and its membranes, it is not repugnant to the principles of sound pathology to preserve the name of *Hydrocephalus*, and to consider it as a distinct disease of the brain, contrary to the too exclusive opinion lately broached by M. Rostan.

"XII. This would render those who were ignorant of *the proximate causes of hydrocephalus* liable to mistake the effect for the cause of the disease, and to receive a contingency purely secondary for the name of a disease of which it only constituted one of the effects, instead of distinguishing it by the part affected. In regard to the *exclusive* opinion of M. Rostan, it is not easy to say whether he ever asserted thus much or not, since the name of the work is not mentioned: I must avow my own disbelief of it, for in his work on mollities cerebri, we read at page 303, 'It seems to me that authors who have treated on these disorders, by whatever name they may have distinguished them, have mistaken the *consequence* of the disease for the disease itself. The names of *hydrocephalic cerebral fevers, serous apoplexy, acute and chronic hydrocephalus*, can only mean an acute or chronic inflammation, or an organic alteration of the brain or its membranes, terminating in an effusion of serosity between the membranes or into the ventricles.'"

CAUSES OF IRRITATION CAPABLE OF PRODUCING HYDROCEPALUS.

Any thing producing and continuing a state of more or less intense morbid excitation: *viz.* external violence, blows, falls upon the head, concussion, wounds of the brain, *the presence of foreign bodies within its substance*, respiration of a deleterious atmosphere, the introduction of irritating or poisonous substances into the alimentary passages, high feeding, and particularly when united with want of exercise, bad provender, excessive heat, sudden change from heat to cold, over sexual exertion, the suppression of morbid secretions or cutaneous eruptions, diseased condition and irritation of the viscera, especially those of digestion, morbid external irritations, attended with long-continued pain and spasm. The principal exciting causes of this affection in the horse are timidity and fear, the ill usage animals often experience in exacting from them actions, movements, or efforts not compatible with their temperament, character, disposition, or strength; indeed, ill usage of any kind, muscular fatigue, and especially in hot weather.

Though horses of all ages and constitutions may become the subjects of this disease, those who are irritable, fiery, or very timid; or such as are malformed—in fact, all that are not able, from either cause, to undergo fatigue, are the most liable; and that in consequence of being compelled to call the nervous energy into undue and continued action, which at length generates in the centre of the nervous system, the brain, a permanent state of morbid excitation.

TREATMENT OF HYDROCEPHALUS.

The treatment must vary according to the intensity of the symptoms, the nature of the disease, whether acute or chronic, and the occasional complication it may present.

"**XIII.** In the present state of science there is no symptom by which we can certainly determine when the effusion constituting hydrocephalus has taken place. As when other serous membranes manifest increased action, and this action continues, their secretion becomes augmented, so we may suspect serous effusion in the brain when the symptoms of arachnoiditis have been protracted, and have manifested a degree of intensity. Although, however, the effusion may have taken place, there is nothing to render its absorption impossible: indeed we have reason to think that it will probably take place under a rational and antiphlogistic plan of treatment."

Acute hydrocephalus, so long as symptoms of excitation or irritation are present, demands blood-letting; the constant application of ice or ice-water to the head; emollient clysters;

and rigid diet. Let the animal have water-gruel if he will drink it; but he is not to be drenched, because the act of drenching will increase the irritation. Setons in the sides of the neck, issues in the head and the neighbouring parts, and revulsives. Purgatives are always contra-indicated: the violent disorder and painful irritation they occasion only serve to exasperate the cerebral excitation. They must be used with caution even when phrensy and all symptoms of irritation in the head have been subdued. We have seen the disease brought back in horses evidently convalescent by the administration of purges, with the foolish notion of clearing the alimentary passages.

In chronic hydrocephalus, while irritation is present, we must also bleed; but we must draw only small quantities whenever debility prevails.

"XIV. At the same time we must take care not to confound real debility consequent upon an impaired constitution or an expenditure of vital energy with the apparent debility produced by oppression, and which uniformly denotes disorder of the brain, either primitive or sympathetic. In cases of direct debility, blood-letting is dangerous; on the contrary, when the strength is reduced by oppression, the time may speedily come when, if blood-letting is not had recourse to, nothing can save the patient's life."

If the pulse, contracted at first, expands on the detraction of blood, the bleeding should be repeated. Setons in the neck, and also in the thighs, may be useful; likewise blisters in the neck, and even cauterizations of the poll and forehead. Lastly, provided there be no irritation in the alimentary canal, and the animal himself be of an unirritable lymphatic temperament, we may give drastic purges, irritating clysters, and diuretics; but should inflammation be present we must confine ourselves to the latter. In all cases we must use every possible means to excite perspiration.

"XV. Almost all substances administered internally by the name of *sudorifics*, act principally on the skin by increasing the general circulation. This is what we have most to dread in arachnoiditis and cephalitis. We must be, therefore, cautious in our sudorifics: warm clothing and vapour baths seem most likely to be beneficial."

Last of all, when hydrocephalus is mild and tardy, though the lancet may still be required, it must be used more sparingly. Setons, mild purges, a liberal regimen, and the removal of all exciting causes, are the remedies. It is certain that a congenital predisposition to hydrocephalus, either from temperament or organic structure, may be removed, or at least rendered inoperative, by a suitable mode of living, exercise properly regulated, and kind treatment.

"XVI. M. Lessona's method of treatment is scientific and proper; but, since hydrocephalus of itself cannot be regarded as a disease, it being invariably preceded by a morbid super-excitation of the brain or membranes, we should always consider it in its proper light—as a morbid condition—one of the possible *(probable)* terminations—one of the secondary effects, either of arachnoiditis or encephalitis, acute as well as chronic. Therefore the treatment of hydrocephalus must be the proper treatment of the diseases capable of producing it; consequently to give close attention to their incipient symptoms is not only the most certain mode of arresting their progress, but also the most effectual means of preventing that effusion in which consists hydrocephalus."

Before we quit the subject of Staggers we give the following extract from a report made by professors Burdin and Dupuy on some cases related by M. Mangin. The quantity of aloes given (8 ounces in 12 hours) is most extraordinary. The report is curious, and worth preserving:—

In the course of the year 1817, the abdominal vertigo, commonly termed simply *vertigo (staggers)*, made great ravages amongst horses in the departments of the Moselle and the Meuse. Mr. Mangin, having had occasion to treat a great number of these animals, was soon led to recognize the insufficiency of the remedies commonly employed. He was called to a horse affected with well characterized vertiginous indigestion; this animal had neither eaten nor drunk for twelve hours. He gave him two drachms of tartar emetic, with four ounces of sulphate of magnesia, in a pint of warm water. This potion was repeated thrice in the space of fifteen hours. He placed a seton in each thigh, and had the limbs rubbed with oil of turpentine. The animal died on the ensuing day. He treated a second and a third horse in the same way, with similar results. A neighbouring veterinary surgeon, who employed similar means, had no better success, and had four horses die under his care, in six-and-thirty hours. Mr. Mangin having remarked, on opening several of the animals after death, that the stomach was empty, whilst the large intestines were filled with a very large quantity of fecal matter, suspected that these intestines might be the seat of the disease; and, considering that tartar emetic acts especially on the stomach, he determined to employ purgatives in large doses. Soon after he had made this resolution, a horse of six years old, affected with the disease, was brought to him. He administered, in the space of twelve hours, four potions, each composed of two ounces of aloes, and three ounces of sulphate of magnesia. Fifteen hours after the first dose, the horse voided a large quantity of fæces. He then gave him decoctions of linseed, with two drachms of camphor, from time to time. The animal suffered

great weakness, which, however, gradually disappeared, and on the sixth day afterwards he appeared to be perfectly well. Three other horses were afterwards cured by the same means; and after this a farmer, who had lost four under the use of bleeding, antimony, and setons, in this affection, consulted Mr. Mangin for two others, which were cured by purgatives.

Mr. Mangin attributes the disease to the hay made in the year 1816, in a very rainy season; and in some other cases, in the next year, to the use of green trefoil, as the sole food. Some other horses affected with it had eaten copiously of new oats.

Professors Burdin and Dupuy blame Mr. Mangin for having administered so large a quantity of aloes in so short a period; but Mr. Mangin apologizes for his practice (which would excite excessive purging in a healthy horse), by observing, that the horse is here in a comatose state; in consequence of which, purgative medicines do not act with their ordinary energy.

EXTRAORDINARY SALIVATION FROM FEEDING ON THE CHARLOCK, OR WILD MUSTARD.

A HORSE, after a long abstinence, during some moderate work, ate, with much voracity, a large quantity of herbage, composed, partly, of the plant sinapis arvensis, and afterwards voided, in the space of twelve hours, nearly six pailfuls of saliva. Three cows, who also ate of this plant, manifested similar effects, though to less extent. Two asses, for the sake of the experiment, were forced, by privation of other food, to eat of this vegetable; but they presented no such effects: the quantity of it eaten by them was, however, very small.—*Compte rendu des travaux de l'Ecole royale d'economie rurale et veterinaire de Lyon, en* 1820.

ADMISSION OF AIR INTO THE VEIN IN BLEEDING.

Mr. BOULEY, a very able veterinary surgeon of Paris, bled a horse, having pneumonia, in the neck, with the phleam, in the usual way. Nothing particular occurred during the early part of the operation; but, as the vessel into which the blood

was received was not large enough to contain the quantity which Mr. Bouley wished to take, he, on its being full, suspended the compression on the vein below the puncture, whilst the vessel was emptied. At the instant when the compression ceased, he heard a remarkable noise, which he had several times noticed in the course of his practice, without any ill consequence following the event, and to which he now, therefore, paid but little attention. The bleeding was completed, and the animal led into his stable. He had but just arrived there when he was affected with a general trembling; his breathing became laborious and *plaintive ;* his pulse small, irregular, and much accelerated; and, finally, he uttered some deep groans, and fell down in his stall "as if stricken by lightning." On reflecting on the whole of the circumstances of the case, Mr. Bouley believed that the noise he heard, above alluded to, arose from the rushing of air into the vein, and he instantly determined to draw more blood from the animal. As the blood flowed, the horse "appeared to assume a new life;" he made some efforts to get on his legs, but did not succeed until the lapse of five or six minutes from the last bleeding. When up, his pulse became sensibly developed,and lost its rapidity; his breathing became deeper; and in half an hour from the time of the accident, he seemed to be in "the same state as before the first bleeding." Some new phenomena were now observed. The horse experienced, during the whole of the afternoon of the same day, "an extreme degree of sensibility of the whole of the right side of the body (the side opposite to that in which the venesection was practised), accompanied with very intense pruitus: he laid down and rolled himself about on this side, to rub himself against any objects that offered resistance."

The pneumonia run its usual course, and terminated favourably. Thirty days after the accident the horse was put to his ordinary work, and has not since shown any sign of disease.

Professor Dupuy, of Alfort, has mentioned that he had witnessed a similar accident, in which a second bleeding was also immediately effected. This case terminated favourably. Dr. Magendie doubts whether sufficient air was introduced to have proved mortal if the second blood-letting had not been resorted to. He injected some air (he does not say how much) into a vein of a dog, and then bled him; but the animal died as soon as if he had not been bled immediately after the introduction of the air.—*Magendie's Journal, No. 2.*

SUCCESSFUL REMOVAL OF A CONSIDERABLE PORTION OF INTESTINE FROM AN OX.

Dr. CHESELDEN relates a singular case of this, with which all our veterinary readers may not be acquainted:—

An ox was suffering under constipation of the bowels. "Thomas Brayer, a doctor for cattle, opened the ox in the flank, and took out great part of his bowels; upon searching which, he found there was a perfect stoppage in the guts, and the gut was, about the stoppage, putrefied for three-quarters of a yard: whereupon he cut off so much of the gut as was putrefied, and took it quite away, and then drew the ends of the guts which remained sound, after what was cut off, together upon a hollow keck, which was about three or four inches long, and sewed the said ends of the guts together upon the said keck, leaving the keck within the guts, and then sewed up the hole cut in the hide upon the flank of the said ox. Within the space of one hour after this operation was performed, the ox dunged, and the piece of the keck which the said ends of the gut were sewn upon came away from the ox with the dung; whereupon the ox recovered, and lived to do the owner service several years."

DURATION OF UTERO-GESTATION AND OF INCUBATION, IN SEVERAL QUADRUPEDS AND DOMESTIC BIRDS.

Extracted from a Memoir read to the Académie Royale des Sciences at Paris, by M. TESSIER.

IN **1131** *cows*, the shortest period of gestation was **240** days, and the longest **321** days; difference, **81** days; and, counting from 9 months, **51** days.

In **582** *mares*, which admitted the horse only once, there was, from the shortest gestation (or **287** days) to the longest (**419**), **132** days; and, reckoning from the **330**th day, or eleven months, **89** days.

In **312** *mares*, which had leaped several times (in dating from the last), from the shortest gestation (that is **290** days) to **377**, the longest, **87** days; and from the **330**th, or eleventh month, **47** days of prolongation.

Of two female *asses*, one carried **380** days, or twelve months and twenty days; the other **391** days, or thirteen months and one day.

In 912 *ewes*, the difference was from 146 to 157 days; and from the fifth month to extreme period, seven days.

In eight female *buffaloes*, there was a difference of 27 days between the shortest and longest period; and the latter extended to 338 days, or ten months and 28 days.

Two *bitches* carried 62 days, one 61, and one 58; which gives, in four animals only, a latitude of four days.

Twenty-five *sows* littered, from 109 to 133 days.

Between the extremes of gestation of 161 *rabbits*, there was an interval of eight days; one of these was the 27th day, the other the 35th.

Incubation.—Several turkeys having sat on the eggs of *hens*, the duration of the sitting was from 17 to 27 days; the same on *ducks'* eggs, 27 days; the same on *turkeys'* eggs, from 26 to 29 days.

Hens sat on *ducks'* eggs, from 26 to 34 days; on those of their own species, from 19 to 24 days.

In *ducks*, the duration of sitting was from 28 to 32 days.

Common geese, from 29 to 33 days.

Pigeons, from 17 to 20 days.

VETERINARY MEDICAL SOCIETY.

WE have much pleasure in stating, that at the last meeting of the "Veterinary Medical Society," held at Mr. Youatt's Theatre, on Wednesday, June 24th, no fewer than seventeen new members were admitted, consisting of nine respectable practitioners residing in the metropolis and its environs, and eight from distant parts of the country; and who were anxious to be enrolled among those who, free from party spirit, were honestly devoted to the pursuit of truth and the improvement of the veterinary art.

The Society will meet on every Wednesday evening during July, at eight o'clock precisely, for the admission of members, and the discussion of questions connected with veterinary practice, and will then be adjourned until the first Wednesday in October.

Communications may be addressed to the Secretary, at the Theatre, Nassau Street, Middlesex Hospital.

Prize Essay, to be sent on or before September 15 :—

The metacarpals and phalanges of the near fore foot of the ox, with their articulations, tendons, blood-vessels, nerves, &c.

THE

VETERINARIAN.

VOL. I. AUGUST, 1828. No. 8.

ANATOMY OF THE HORSE.

(Continued from page 227.)

PALATE BONES. (OSSA PALATI.)

Situation.—Infero-posterior part of the face, adjoining the base of the cranium.

Figure.—One portion is semi-circular ; otherwise it is irregular.

SURFACES.—*The palatine surface* is that which is turned downwards, and contributes to the formation of the palatine arch. *The nasal surface,* the broadest, confronts its fellow, the two forming the sides of the posterior opening of the nose : its supero-posterior part is pierced by the posterior palatine foramen. *The orbital surface* is in part smooth, where it enters into the composition of the back of the orbit ; and in part rough and laminated, where it articulates into the superior maxillary bone : the latter portion exhibits the palatine canal, which leads to the anterior palatine foramen. Between this and the superior maxillary bone a hiatus, or sort of vestibule, is left vacant, in which is observable the posterior opening of the foramen above-mentioned, besides two others formally described. *The ethmoidal surface* is divided from the nasal by the palatine crest, to which the vomer is joined : it is oblong and concave, and constitutes the floor of the ethmoidal sinus, possessing several irregular ridges, which form so many imperfect septa, projecting into the cavity.

BORDERS.—*The palatine,* round, smooth and lunated, forms the circumferent boundary-line of the posterior opening of the nose, and affords attachment to the velum palati : from it, posteriorly, descends the styloid process, whose extremity, in the recent subject, is provided with a cartilaginous pulley, in which runs the tensor palati ; the posterior side of the process is rough and laminated for articulation with the pterygoid process of the sphenoid bone. *The supero-lateral* and *infero-lateral borders* unite with

the superior maxillary bone; the former has also a connexion with the inferior turbinated bone: these borders are both denticulated.

EXTREMITIES.—*The posterior* or *orbital* is expanded, and is received between the frontal and ethmoid bones: *the anterior extremity* is narrow, incurvated upwards, and joins its fellow.

Particularities.—The styloid processes, or rather epiphyses, are rarely preserved disunited and entire after maceration, owing to the late period at which they continue to be ligamentous at their roots, as also to the length, slenderness, and consequent frangibleness of them.

Connexion.—With the frontal, ethmoid, and sphenoid; and with the superior maxillary, inferior turbinated bones, and vomer.

THE TURBINATED BONES, SUPERIOR AND INFERIOR. (OSSA TURBINATA, SUPERIORA ET INFERIORA.)

Situation.—Within the chambers of the nose, attached to the outer walls; the superior, above; the inferior, below.

Form.—Oblong, thin, foliated, convoluted, cavernous.

Division.—Into external and internal surfaces; superior and inferior extremities.

SURFACES.—Porous. *The external* is convex; and presents series of longitudinal grooves, disposed in an arborescent manner, which mark the ramifications of very small blood-vessels. In consequence of the bone being rolled up or twisted round itself after the fashion of a turban, the outward superficies becomes extensive, although it diminishes in breadth beyond the exterior, in consequence of the internal convolution being, in course, smaller than the external. *The internal surface*, or opposite side, is concave, and, like the former, necessarily diminishes as it proceeds inward. The interior itself is cavernous, or rather cellular, being unequally divided by transverse septa into several little sinuses or cells, communicating through small apertures one with another, and through the intervals between the convolutions, with the middle nasal meatus.

EXTREMITIES.—*The posterior* or *basiform*, are broad; their interior is capacious, and open superiorly; and they communicate with the sinuses immediately behind them. *The anterior* or *apiform extremities* are contracted and closed; and give origin, in the recent subject, to two cartilaginous productions, which project into the chambers of the nose.

Particularities.—These bones are four in number: two superior, and two inferior. They are thin, and porous or spongy in their texture; brittle, and yet possessing sufficient elasticity to

enable them to resist considerable pressure, and withstand, without fracture, any ordinary injury.

Difference.—The superior bone exceeds in volume the inferior, and makes its convolution from below, its upper border being attached; whereas, the reverse is the case with the inferior one.

Connexion.—The superior bone is connected, above, with the ethmoid; and laterally, with the nasal bone. It contributes to the formation of the anterior part or floor of the frontal sinus. The inferior turbinated is fixed to the superior maxillary bone.

THE VOMER.

Situation.—Along the floor of the nose, preserving the median longitudinal line dividing the chambers.

Figure.—Elongated: posterior portion, broad, quadrilateral, and flattened; anterior, narrow, grooved, and lengthened.

Division.—Into two extremities and two borders.

Extremities.—THE POSTERIOR OR BROAD PART exhibits *a lower surface*, somewhat convex, which is smooth and free; *an upper surface*, somewhat concave, which embraces and almost conceals the body of the ethmoid bone; *a superior crescentic border*, between which and the ethmoid is a narrow hiatus, giving passage to some blood-vessels and nerves to the septum narium; *two lateral borders*, united with the palate bones; and *four cornua* or projecting acuminated ends, the two superior articulating with the sphenoid bone, the inferior with the palate bones. THE ANTERIOR EXTREMITY is broader than other parts of the grooved shaft, in consequence of being flattened above and below; it reaches as far forward as the palatine processes of the anterior maxillary bone.

BORDERS.—*The superior* presents a long narrow chasm or groove, deeper posteriorly than anteriorly, which receives the cartilaginous partition called the septum narium. *The inferior border* is semi-cylindrical, and presents a posterior part, smooth and free from any connexion; and an anterior, which denticulates with the palatine processes of the superior maxillary bone.

Connexion.—With the ethmoid and sphenoid, and with the superior and anterior maxillary and palate bones.

THE INFERIOR MAXILLARY BONE. (OS MAXILLARE INFERIUS.)

Constituting, by itself, *the inferior maxilla*, or lower jaw.

Situation.—Composing the inferior and posterior parts of the face.

Form.—Symmetrical, bearing much resemblance to the letter V ; the angular or narrow part being presented forwards, the sides diverging and opening backwards.

Division.—Into body, neck, sides, and limbs or branches, together with their respective external and internal surfaces and borders.

THE BODY is the anterior undivided portion, reaching back so far as to include the tusks within their sockets. THE NECK is the contracted part springing from the body ; the two together forming a solid bond of union between the sides, sustaining them, together with the branches, in immovable relative position. In the young subject, a longitudinal median suture, named the inferior maxillary symphysis, divides the bone at this part into separable symmetrical halves ; bony union, however, solidifies the two early in life, after which they are no longer distinct pieces. *The external surface* of the body is convex and rounded, and in places rough and porous, from the attachment of the levator menti and gums. A groove across the neck marks the course of the former symphysis. At the place where the neck joins the side, near the superior border, is the anterior maxillary foramen, which forms the outlet of a canal running between the laminæ of the bone along the roots of the molar teeth : it is traversed by the third division of the fifth pair of nerves. *The internal surface* of the body is slightly concave, and is rough and porous from the attachments of the gums and membrane of the mouth ; that of the neck forms a channel for the tongue, and receives the insertion of the frœnum linguæ. *The border* projects forward, forming a parabolic curve, and presenting, superiorly, conical alveolar cavities for the six lower incisive teeth and the two inferior tusks ; posteriorly, on the neck, the border rises into a sharp edge, which is rendered less prominent in old horses, in consequence, it would appear, of the repeated pressure and friction of the bit.

THE SIDES are the parts comprehended between the neck and the branches : they include all the inferior molar teeth. They increase in breadth from before backward, are flattened laterally, and present external and internal surfaces, superior and inferior borders. The surfaces, though, generally speaking, they may be pronounced to be flat, possess a degree of prominence in early and adult life which they lose in age : this may be ascribed in part to the teeth, and in part to the comparative porousness or incompactness of structure of the young bone. The external surface is occupied by the depressor labii superioris ; the internal by the muscles of the hyoidean region. The vacuity between the sides takes the name of inter-maxillary space. *Of the borders,* the superior exhibits twelve quadrangular alveolar cavities for the molar teeth,

formed by the separation of the laminæ composing the bone, and the addition of so many transverse long partitions or septa. The inferior border is thick, round, and smooth in early life; but, as age advances, grows thin, sharp, and irregular.

THE BRANCHES, the parts directed upwards, are broad, thin, and slightly curved; and offer for notice two surfaces, two borders, two processes, and a notch. *The surfaces* are generally smooth, though they exhibit marks of muscular attachment: the external one is clothed by the masseter; the internal, by the pterygoideus internus; the latter, also, is pierced a little behind the last molar tooth, by the posterior maxillary foramen, which forms the entrance to the dental canal, the anterior maxillary hole being its outlet. *The borders:* The posterior is broad, and roughened by the attachment of the stylo-maxillaris and masseter: the part where it makes its curvature to join the side is called the angle of the jaw. The anterior border is thin, and presents a sharp edge, turned inwards: it gives attachment to the buccinator and depressor labii inferioris. *Processes:* The posterior border is surmounted by the condyle, the transverse, cylindroid, smooth convexity which is received into the glenoid cavity in the temporal bone. The anterior border ends in the coronoid process, which is flattened on its sides, has sharpened edges, and is slightly curved backwards: into it is implanted the temporal muscle. Between the two processes is *the corono-condyloid notch*, which furnishes room for the motion of the jaw, as also for the insertion of the temporal muscle.

Communications and Cases.

Quidquid agunt *Veterinarii*
——————— nostri est farrago libelli.

ON COMPARATIVE ANATOMY.

To the Editor of The Veterinarian.

DEAR SIR,

IT gives me much pleasure to perceive your valuable publication made the vehicle for the dissemination of useful information, as connected with the treatment of disease afflicting the inferior orders of animals. I therefore request a corner in an early number, for the insertion of this note; and wish to direct the

attention of your readers, more especially veterinary students, to the study of minute comparative anatomy; and although their thoughts will be chiefly directed to the diseases of the horse, yet their skill will be often found useful with other domestic animals, as the dog, sheep, &c. &c. It is with regret I have heard veterinary students scorn minute dissection, and treat with contempt the anatomy of the dog and other inferior animals. I have also heard many argue, that there is no necessity for a minute knowledge of the course and distribution of the arteries and nerves in the horse: I contend there is; and when I have perceived the slovenly dissections, the ramifications of nerves and blood vessels (even where injected) wantonly cut away, I could not help experiencing feelings of regret at such conduct. It is neither philosophical nor like an anatomist. Your publication appears calculated to benefit the public materially; and I take the liberty of informing you, that I am collecting materials for my large work on comparative anatomy, as well as from dissections of my own. If any extracts are worth a place in your work, I shall occasionally transmit you some.

I remain, yours faithfully,

H. W. Dewhurst.

ON THE NERVES OF THE UTERUS AND FEMALE ORGANS.

By C. H. Hawkins, *Esq.*

[From the Philosophical Transactions, 1825.]

"THE nerves of the human uterus are supplied from six different plexures: the spermatic within the abdomen; the great hypogastric plexus between the common iliac arteries; and four within the pelvis, two of which are situated on each side of the uterus. All of these have the peculiar appearance of the sympathetic nerves; and they are intimately connected with all the other nerves of the viscera.

"The uterine nerves in the dog, cat, rabbit, and guinea-pig, so nearly resemble those of the human subject, as to render a minute description of them unnecessary. The spermatic plexus is formed by branches of the renal plexus and two nearest lumbar ganglia of the sympathetic nerves. It supplies the horns of the uterus, the ovaria, and apex of the urinary bladder.

"The common hypogastric plexus, after having supplied the body of the uterus, gives off a large nerve of considerable length, which dips down into the pelvis, and unites with numerous branches of the third sacral nerve, and smaller branches from the

second and fourth; a remarkable plexus is thus formed, which contains several distinct ganglia. It distributes nerves to the body of the uterus, vagina, bladder, and rectum, the integuments of the upper part of the pubes, and the muscles of the inferior outlet of the pelvis. A few branches pass down to communicate with the fourth sacral nerve, where it gives origin to the pubic nerve. These nerves arise from the plexus in such a way as to resemble the ramifications of the venæ vorticosæ in the choroid membrane of the eye.

"The difference, therefore, between the nerves of the human uterus and those belonging to the uterus in the quadruped, consists in the formation of only one lateral hypogastric plexus, and consequently in the existence of only four nervous centres in the latter. There appear also to be more ganglia in the plexiform distribution of the sympathetic nerve. In the seal, several large ganglia are found in the broad ligaments of the uterus.

"The nerves belonging to the female organs of birds are distributed as follows: The sympathetic nerve is found close to the origin of the spinal nerves, protected by the double heads of the ribs, between which it runs. The spinal nerves, that correspond to the lumbar and sacral nerves in quadrupeds, emerge near each other; and as the sympathetic nerve communicates with each of them, and forms a ganglion immediately after their appearance from the vertebral foramina, there is an almost uninterrupted ganglion of considerable length, from which numerous filaments go off to supply the oviducts. Others run upwards, and are distributed on the ovaria.

"Near the termination of the oviduct, in the cloaca, a plexus is formed, nearly similar to the lateral hypogastric plexus in quadrupeds, which is distributed in a similar manner to the oviduct and cloaca. There is a similar pudendal nerve.

"Fewer ganglia are formed near the aorta than in quadrupeds; and scarcely any branches are sent from the common hypogastric plexus to the oviduct.

"In the frog, as there is no proper sympathetic nerve, the abdominal viscera are supplied directly from the spinal nerves. These, soon after they emerge from the vertebral canal, become slightly enlarged: this does not deserve to be called a ganglion. From each of the spinal nerves in the lower part of the back and loins, a small nerve is given off, which takes a direction towards the centre of the bodies of the vertebræ, where they unite with each other, and with the corresponding nerves of the opposite side. By this union, a flat nervous web is formed, which stretches across the aorta, and extends downwards into the pelvis: this is analogous to the splanchic plexus in hot blooded animals.

"From the upper surface of this plexus many branches run upwards towards the intestines and kidneys; but the greatest number are distributed on the ovaria.

"The lumbar nerves on each side give off several branches, which pass at once into the oviduct. The last lumbar nerves pass down upon the surface of the psoæ muscles, and, near the pubes, give off a branch which takes a circuitous course towards the lateral portion of the bladder, and the extremity of the oviduct. The continuation of the aortic or abdominal plexus, in union with some branches of the sacral nerves, forms, on each side of the pelvis, a kind of plexus, which distributes branches to the cloaca and lower portion of the oviducts.

"The nerves corresponding with those which have been described in the frog, run almost entirely in straight lines, instead of having the intricate reticulated texture of the visceral nerves in hot blooded animals. The ganglia are indistinct, and the fibres that compose them resemble those of the muscular, more than the visceral nerves."

ON STAGGERS.

By Dr. GREEN, *of Lewisham.*

To the Editor of The Veterinarian.

SIR,

I BEG to enclose a short case of staggers, which, by permission of Mr. John Percivall, I have taken from the Royal Horse Infirmary, Woolwich. It may, however, not be irrelevant to offer a few observations on the nature of this disease.

Authors have designated this disease under such a variety of appellations as must necessarily tend to confuse the student. Medical writers have, in the human subject, described no less than nine distinct species of apoplexy, classing them as the symptoms evince their different characters.

Mr. Wm. Percival, in his Elementary Lecture, has, I think very judiciously, divided this disease into two heads only, as it regards the horse. He observes that the brain may be primarily and actually diseased; or it may be sympathetically, or secondarily affected. Were any distinct term to be given to the disease, I know of none more appropriate than *apoplexia somnolenta*.

Of the first of these divisions, the predisposing cause is plethora; and thus producing a determination of blood to the head, compression, and its consequences. The immediate cause, however, may be superinduced by different circumstances, which, though

differing in their nature, ultimately produce the same effect: and whether it proceeds from over-distended blood vessels, or external injury, the nervous energy is partially interrupted, or altogether suspended.

Symptomatic, or stomach staggers, from distension of the stomach, although the ultimate consequences may be the same, requires a different mode of treatment. Let the cause, however, be what it may, such effects are produced on the brain as to prevent the nerves from exercising their due influence.

Dr. Cullen believed that whatever interrupted the motion of the nervous power from the brain, or of the blood to it, was the proximate cause of this disease.

Phrenitis, or what is called mad staggers, I should consider merely as a consequence of a previous disease, and not a primary affection.

There is another malady nearly allied to apoplexy, which is that species of epilepsia termed meagrims. The diagnosis of this will be in the suddenness of the attack, convulsions, and the state of the pulse.

Having made these prefatory remarks, I proceed with the case, which comes under the head of plethora. You will perceive that in the use of purgatives, croton has been substituted for the more common one of aloes; and that for two important reasons—it acts more speedily, and clears the whole course of the intestines. It has been objected to from the danger of superpurgation. There is little fear of that in this disease; and in other cases it only requires discrimination in its use.

June 23.—Admitted into the Royal Horse Infirmary, Woolwich, a bay horse, aged 7, with the following symptoms:—Stands in a state of somnolency, with his head hanging under the manger or thrust against the corner of the box. The vessels of the tunica conjunctiva loaded with blood; loss of appetite; pulse 40, and full; bowels torpid.

V. S. lb. viij.

℞ Pulv. Croton . . . . . gr. x.
Terebinth. Com. . . . . ℥j. M. fiat bol. statim exhib.

Enemas, cum Muriat. Sodæ, Sapone et aquâ.

24th.—Somnolency and other symptoms still continue, although not to the extent of yesterday: bowels relieved.

℞ Croton sem. . . . . gr. v.
Terebinth. . . . . ʒ v. P. Sem. Lini et Theriacæ q. s. fiat bol. statim exhib.

Enemas to be repeated.

Inf. Vesicat. to the legs, bowels, throat, and chest.

25th.—Appears better; bowels freely open; pulse soft, about 35.

℞ Croton sem. . . . . gr. v. P. Sem. Lini et Theriacæ q. s. fiat bol. statim adhib.

Discontinue Enemas.

Blisters discharge upon the legs.

26th.—Very much improved.

Rep. Bolus cum Croton . . . . gr. v.

Oatmeal drink.

27th.

Rep. Bolus.

Oatmeal drink continued.

Seems inclined to feed a little.

28th.—Going on well.

Rep. Bolus.

Feeds a little.

29th.—Convalescent.

Discontinue Medicament.

July 5th.—The horse has been daily improving.

HORNS IN THE HORSE.

By Charles Percivall, *Esq. Enniskillen Dragoons.*

SOME time after joining the 11th Dragoons, I was asked by an officer of the regiment whether I had ever seen the horse with horns, belonging to L. Troop. This horse had once or twice been the subject of conversation at the mess-table; but it struck me to be a hoax, and as such I paid little or no attention to it. A year and a half having elapsed, he was admitted into the hospital stable, with an attack of spasm of the intestines, when the dragoon pointed out the excrescences above alluded to, placed about two inches above the orbital process of each frontal bone, in the centre of the forehead, two inches apart, projecting from half to three quarters of an inch from the surface of the frontal bones, very much resembling what is felt in young calves five or six months old.

ENLARGEMENT OF THE STENONIAN OR PAROTID DUCT.

[*By the same.*]

A HORSE belonging to E. Troop was shewn to me, shortly after joining the regiment, by the farrier, who stated, that about six or eight months previously he had a trifling enlargement on the side of the face, which the farrier major, upon its being shewn to him, opened; and that for some time afterwards it discharged a watery fluid, and upon the discharge ceasing it took to swelling, and had been gradually becoming worse. The duct was considerably enlarged throughout its whole extent, very much resembling a thick cord, and at that part where it penetrates the cheek (being where it had been punctured) was as large as a duck's egg. He did not appear to suffer any inconvenience from it; but being unsightly, and from the farrier's assuring me it was increasing in size, I ordered it to be blistered, which was repeated, but without effecting any reduction of it.

CASTRATION.

[*By the same.*]

HAVING been requested by Dr. P——, of the Hon. East India Company's Service, to castrate a horse for him, I accordingly had him cast for the purpose. Commencing with the left testicle, which having extracted, I proceeded to remove the right. Having opened the scrotum, and divided the tunica vaginalis, I naturally expected the testicle to make its escape, but instead of so doing, it remained within its cavity, in consequence of firm adhesions between the tunica vaginalis and tunica albuginea, at the inferior and posterior part, which I had great difficulty in separating; indeed, I could not accomplish the removal of the testis without the aid of the scalpel. On the third and fourth day there was considerable swelling; but in the course of a week it subsided, and the horse did very well.

Although this adhesion between the tunics is not mentioned by any writer, it is not of unfrequent occurrence, and rarely followed by any untoward symptoms.

TWO CASES OF TETANUS SUCCESSFULLY TREATED.

By Mr. E. Saunders, *of Wolverhampton.*

Case I.

MARCH 30, 1819, I was requested to attend a chesnut colt, four years old, that had been taken up to be broken, the property of Mr. Bamford Bradely, near Bilstone, Staffordshire. I was immediately convinced that it was Tetanus, from the following symptoms: Jaw completely closed, saliva flowing from the mouth; rigidity of the principal muscles of the body, pulse slow and irregular, and tail elevated. Previous to my being called in, he had been under the hands of a farrier for a short time, who, when the jaws became set, recommended that he should be destroyed.

Treatment.

1st Day.

V. S. Libras x—Cape Aloes 3vfs; Digitalis 3ij; Camphoræ 3iij; Sp. Rectif. 3ij; Aq. ad 3xij.—Fiat Haustus.

2d Day.

V. S. Libras x—Aloes 3x; Digitalis 3ij; Camphoræ 3iij.

3d Day.

V. S. Libras ix.

Considerable stupor was now observed. Not so much agitated when moved, the cutaneous nerves having lost a portion of their sensibility. Sudden noises had very little effect on the general frame.

I combined camphor with the other medicines for the three or four first days, because I fancied that its stimulus on the tongue and fauces caused the animal to make greater efforts to swallow. I know not the precise action of camphor on the horse, except that it is evidently a stimulant. In the human being it is an antispasmodic and diaphoretic. If it has a similar effect on the horse, it must be a useful auxiliary in the treatment of tetanus.

4th Day.

Camphoræ 3iij; Digital. 3ifs.

The medicine operates briskly on the bowels. The muscles of the jaw are not so rigid; and the horse can eat a little hay. Three cold mashes ordered daily.

5th Day.—Either the aloes, digitalis, or camphor, was acting most powerfully as a diuretic. The sedative effects of the digitalis seem a little to subside. Ordered small quantities of steeped oats in the mashes.

6th Day.—Spasms slightly returning; the sensibility of the cutaneous nerves evidently increasing, noises producing the greatest agitation.

V. S. Libras x.—Digital. 3ij.

This dose of digitalis, and bleeding, evidently had, in the space of six hours, a wonderful effect in lessening the irritability of the nervous system.

7th Day.—Great stupor this morning. He had scarcely moved from the spot on which I left him the preceding day. Cold mashes, hay, and what water he would drink supplied seven or eight times daily, in consequence of his excessive thirst.

V. S. Libras x.

8th Day.—Eats with the greatest ease mashes and hay. Pulse frequent and somewhat weak.

9th Day.

V. S. Libras vij—Digitalis 3j.

Pulse frequent and strong before the bleeding. Trismus may be said to have left the jaw. Noises and walking about produced not the slightest agitation.

Here the medical treatment finished. I kept him in a fold-yard until the twentieth day; after which I ordered him to be turned out day and night in a contiguous field; and left the rest to nature.

I requested that the muscles which yet remained rigid might be rubbed every morning with a little oleum commune, which were principally those of the hind extremities. The total quantity of blood taken, from the first to the ninth day, was twenty-eight quarts.

Case II.

A coach horse, the property of Mr. R. Evans, was attacked with the usual tetanic symptoms, as in the preceding case.

Treatment.

1st Day.

V. S. Libras x—Cape Aloes 3vfs; Digitalis 3ij; Camphoræ 3iij et Vini Rect. 3ij Aq. Pur. ad 3xij. Fiat Haustus.

2d Day.

V. S. Libras x—Aloes ʒviij; Digit. ʒij; Camphoræ ʒiij.

4th Day.

V. S. Libras ix—Digitalis ʒiſs; Camphoræ ʒiij.

6th Day.

V. S. Libras ix—Digitalis ʒj.

8th Day.

V. S. Libras ix.

9th Day.

V. S. Libras ix—Digitalis ʒij.

Here the medical treatment finished, except applying a blister to the lumbar region. The horse was turned to grass on the twentieth day. The quantity of blood abstracted was about the same as in the preceding case.

At the expiration of two months, when all the tetanic symptoms had disappeared, he went like a horse (said in the groom's language to be) rigged in the back; and, probably, the pressure or injury done to the spinal marrow was the exciting cause of the tetanic affection.

I consider tetanus to arise from an irregular distribution of the nervous influence, which, I think, is exemplified by the well-known torpor of the bowels, and the extreme sensibility of the skin. There is likewise evident spasmodic contraction of the muscles of voluntary motion, which are only partially under the control of the will. This is clearly proved by the awkward gait of the animal when he attempts to move.

The sedative effects of digitalis I have long proved in cases of inflammation of the heart and lungs. Aloes are our first remedy as a corrector of the digestive organs; and venesection, in large and repeated quantities, must weaken that rigidity so evident in the muscular fibre, and possibly assist in diverting the irregular distribution of the nervous influence to its uniform or usual channel: these impressions induced me to pursue the foregoing course of treatment. Should I be fortunate enough to suggest that which will occasionally alleviate the sufferings of so useful and noble an animal, under this dreadful malady, I shall be content, although mine may not prove an infallible remedy, which, indeed, I have not the folly to expect.

The doses of aloes and digitalis may be thought very great. It should, however, be remembered, that in many diseases, espe-

cially those of the cerebral system, large doses of medicine may be given with scarcely any sensible effect; and that in a state of health less than half the dose would prove fatal. I gave bleeding a fair trial, and pushed it to its full extent. The pulse, in general, indicated this course. Both horses were exposed to the cool air, as they were placed in a fold-yard, and the heavens watered them pretty plentifully. The muscles of the head first lost the spasmodic affection; then those of the neck and body; and, lastly, the muscles of the hind extremities. It was six weeks or two months before the hind legs could be said to be perfectly free from spasm. I turned them to grass about the twentieth day, when the animals were enabled to get their heads conveniently to the ground to graze. The medicine was usually given two hours after the bleeding; the muscles were then somewhat less rigid, and the animal could swallow better. In the first case the jaws were so completely closed, that fruitless efforts were made to give the medicine previously to the bleeding; but it was given with the greatest ease afterwards. I observed considerable caution in not agitating the patient more than was absolutely necessary in giving the medicine. The following year I had the pleasure to see the first horse broken in, and sold for fifty guineas.

A CASE OF STONE IN THE BLADDER OF THE HORSE.

To the Editor of The Veterinarian.

SIR,

EVERY case of stone in the bladder of the horse, though comparatively, in regard to human surgery, a rare occurrence, is of importance, and worthy of record on account of the torture and danger which uniformly attend it. Under this impression I send you the following case for insertion. It is of old date; but for the accuracy of it I can answer, for the minutes were recorded by myself at the time.

The subject of this disease first attracted attention on the 25th April, 1824, when he appeared to labour under a spasmodic attack of the bowels; for which he was treated in the usual way, with bleeding, turpentine, and external stimulants to the belly. No relief was obtained: he lay down, rolled, rose up again, broke out into profuse sweats, with a pulse at one time very small and

quick, at others hardly perceptible. These symptoms harrassed him all the next day; and the only variation in the treatment was the frequent exhibition of tinct. opii in doses of ʒfs. Towards the evening the animal began to make repeated efforts to stale, without voiding any, or but very trifling quantities of urine; and these scanty discharges were attended with expressions of very considerable difficulty and pain. This led me to believe that there was obstruction either within the urethral canal or at the neck of the bladder; and with a view of ascertaining this point, I passed a probe, or rather catheter, into the passage, and endeavoured to force it onward; but this I found impracticable. On further examination I found two fragments of calculus sticking within the glans penis, which I easily removed. This seemed to afford him some relief. However, I felt anxious to examine into the state of the bladder, which I did without loss of time *per rectum*, and soon felt a stone within it, seemingly larger than a common hen's egg. I made many strenuous efforts to displace it, and at length succeeded in pushing it into the urethra, but could by no means urge it beyond the curvature. However, its being forced thus far was considered to be a great advantage, inasmuch as the stone was in a more favourable situation for excision, an operation for which I prepared without loss of time. But succour arrived too late; and the animal, worn out by unremitting pain, died before the operation could be commenced. Had there been an earlier manifestation of the nature of the complaint, the horse might, and certainly would, have been saved.

On examination the stone was found within the urethra. The substance of the canal, through its whole extent, was very much thickened; its internal membrane in places ulcerated, as well as the mucous lining of the bladder, in which, at the inferior part where the stone mostly lay, was a perforation sufficiently large to admit a goose quill. This hole must have existed some time prior to death, for between eight and nine gallons of fluid, evidently highly urinous, were found within the cavity of the abdomen. The viscera in general, and particularly the intestines, assumed the aspect of inflammatory action, the natural effect of such a foreign and acrid intruder as urine.

Mr. Cruickshank, professor of chemistry to the Ordnance, at my request did me the favour to examine the stone, and found it to consist almost entirely of calcareous earth.

This case not only reminds us of the indispensable duty incumbent upon us, industriously to investigate the symptoms of disease, and search into their origin and causes, but also presents us with a proof of the danger of delay when the existence of calculus is ascertained, lest it should be productive of such disease of the

parts with which it is in contact, as to make life the forfeiture of its continuance.

The best collection of cases I have met with on this subject, are those which appeared in No. 4 of the "Veterinarian," page 119. They rest on continental authority; but they have the appearance of truth, and are well worthy of the perusal of those who seek information on this most important subject.

I am, Sir, &c.

JOHN PERCIVALL, Senr., V. S. to the Ordnance.

ON RABIES CANINA. *By* W. YOUATT.

(Continued from page 159.)

I THINK we are justified in concluding, from the foregoing statement, that rabies is produced by inoculation alone, and that the virus is confined to the saliva.

The virus of every rabid animal will communicate the disease. It is chiefly propagated by the dog, because with him the teeth are the natural weapons of offence; and when labouring under this malady he has a strange and irrepressible disposition to bite. He is likewise most exposed to inoculation; and there would seem to be in him a peculiar aptitude to take on the disease.

The saliva of the cat, the fox, the badger, the wolf, the horse, the pig, the human being, have undoubtedly produced rabies, and some say that it has been propagated even by the hen and the duck.

Veterinarians should therefore be careful how they administer medicine, where there is the slightest reason to suspect the existence of rabies. If the hands be not perfectly sound (and of that we cannot be always sure), the mouth should be carefully avoided. Many farriers have perished from ignorantly or foolhardily drenching or balling a rabid dog; and a groom, not long ago, became hydrophobous from a scratch which he received in administering a ball to a horse.

The virus does not appear to have the same effect on all animals. Almost every dog that is bitten by one that is rabid, becomes rabid. The majority of horses inoculated with the virus perish. Cattle have more chance. The skin is looser, and less easily penetrated. A full half of those who were seized by a mad dog would escape. With sheep the bite is even less dangerous. The tooth has perhaps been cleaned in its passage through the

wool. Not more than one in three who had been attacked by a rabid dog would be affected.

The human being is least of all in danger. Mr. John Hunter supposed that, if twenty persons were bitten, probably not more than one would become hydrophobous. This, however, is calculating far too highly the chance of escape. We have many accounts of the dreadful ravages of this disease in other countries. M. Trolliet tells us, in his valuable "Traité de la Rage," that in May, 1817, twenty-three persons were bitten by a rabid wolf, of whom no less than fourteen died, in defiance of all curative means. In 1827, two persons were bitten by a rabid dog in the neighbourhood of Ball's Pond: one of them was lost, although operated on by one of our most skilful surgeons. Two years before, a Newfoundland dog was sent to my residence, evidently unwell, but the nature of the malady not suspected. There was either something very deceptive in the case, or my assistant was unpardonably careless. The animal was dismissed with a little physic. On the next day rabies was sufficiently developed. One person only was bitten, but the poor fellow became hydrophobous.

There can be no doubt, however, that the decided majority escape, even if no means, or those which are inert and insufficient, are adopted. Hence the falsely-acquired reputation of so many prophylactics.

This immunity depends on various circumstances. The bitten part may be covered by the clothes, and they may be woollen. In passing through them, the tooth may be perfectly freed from the virus. Most of those who died hydrophobous were bitten in the hand or face. Dr. Parry relates an interesting circumstance applicable to the present point. Dr. Ingenhousz was experimenting on the deadly power of the Ticunas poison. He had just envenomed the point of a knife, when it fell from his hand, and, piercing the shoe and stocking, wounded his foot. He threw himself back in his chair, and calmly said, "In five minutes I shall be a dead man." The five minutes, however, having elapsed without any symptoms of approaching dissolution, he ventured to remove the knife, and wash the wound. The poison, like the vitiated saliva, was in a fluid form, and it had been entirely wiped from the point of the knife in its passage through the shoe and stocking.

Insatiable thirst accompanies the later stages of rabies. The virus may have been largely diluted with water, and rendered comparatively innocuous.

There is, however, something more than this in the affair. The skin of the dog is loose, like that of cattle. It is sometimes covered with thick hair; and, except in the petted and delicate varieties, it is not very easily penetrated; yet almost every dog that

is inoculated with the rabid poison is lost. There is a predisposition to be affected which does not exist in other animals. There is an affinity between the virus and the tissue with which it comes in contact, or a facility for the development and growth of the virus.

An animal or a human being is bitten by a rabid dog. A certain portion of the poison is received into the wound: it produces no immediate irritation; there is nothing to indicate its presence. Some old writers, indeed, recommend us to place the fresh leaves of rue on the wound. If they retain their colour, it is not envenomed. If they change to a violet colour, the rabid poison has been introduced. They likewise tell us to rub a bit of bread in the blood or fluid discharged from the wound. If there be no danger, a dog will readily eat of it; if it be contaminated with the virus, he will refuse it, with howling.

These fooleries are now despised. There is nothing to indicate the presence of the virus. The wound heals, as would another wound, according to its situation, magnitude, laceration, and the constitution of the patient. Days, and weeks, and months pass, and not the slightest circumstance occurs to indicate impending danger.

What then is this virus? It has never been analysed. That would be a process difficult to accomplish. It is not diffused through the air, nor communicated by the breath, nor by any effluvia, nor even by actual contact, if the skin be sound. It must be received into a wound; or it must come in contact with some tissue or nervous fibril; and there it lies dormant for a considerable but uncertain period, and longer in some animals than in others.

It remains perfectly undecomposed. The absorbents are actively at work in removing every thing around. The capillary vessels are depositing fresh matter, but it seems to remain the same. Whatever else is useless, or would be injurious, is taken up, and the tissue or the fibril on which the virus rests is modified or changed; but this extraneous and fatal body bids defiance to all the powers of nature.

It enters not into the circulation, or it would necessarily undergo some modification in its passage through the innumerable minute vessels and glandular bodies which are scattered through the frame. It would excite some morbid action; or if it were not thus employed, or in the purposes of renovation or nutrition, it would be speedily ejected.

It lies for an uncertain period dormant; but at length, from its constant presence as a foreign body, it may have rendered the tissue or nervous fibril more irritable and susceptible of impression; or it may have attracted and assimilated to itself elements from the

fluids that circulated around it, and thus increased in bulk; and at length, according to a law of chemistry, supplied by quantity that which it wanted in strength of affinity.

Whatever be the *modus operandi*, the parts in contact with the virus at length respond to the stimulus applied to them. The cicatrix generally begins to itch, and inflammation spreads around it. The diligent licking of some part where the mark of a bite can be traced, is an early and frequent symptom of rabies in the dog. The absorbents are now called into more powerful action. They begin to attack even the virus. A portion of the morbific matter is taken up and carried into the circulation, and disease and death ensue.

At what period of time does this fatal activity commence? It is different in different individuals and different animals. While the rabid virus lurks in the frame, any thing that produces considerable excitation in the system, or that renders the nervous fibres, or the textures generally, suddenly and highly irritable, may rouse it to action. These causes may even rouse to activity that which would otherwise have never possessed sufficient power to affect the constitution. There are several instances of this in the annals of human medicine. If the pregnant bitch becomes rabid, it is within two or three days of parturition. The bitch not in pup is often attacked during the period of œstrum.

Most strange and contradictory accounts are given of the time between the bite and the appearance of hydrophobia in the human being. Some have asserted that it has appeared on the same day, or within two or three days. We should be at no loss under what class of nervous diseases to rank affections like these.

Dr. Bardesley relates a case in which twelve years elapsed between the bite and the disease. If it may lurk so long as this in the constitution, it is a most lamentable and dreadful affair. If the sword may be so long suspended over the patient, his situation is most pitiable.

With the exception, however, of another case, and that of apocryphal character, and in which nineteen years are said to have intervened, Dr. Bardesley's account stands alone; and it is adduced by him to establish a particular hypothesis.

M. Bresa mentions a case, but clearly not one of rabies, in which five years and a half elapsed between the bite and the disease. There is an authenticated case related by Mr. Nourse, in which nineteen months passed, a sufficient length of time for the patient and his friends to endure the torture of suspense.

The usual time, I believe, is calculated at about six weeks, or extending from three weeks (Dr. Mason Good says ten or twelve days) to six or seven months.

In the dog I have never seen a case in which the disease occurred in less than seventeen days after the bite. The average time I should calculate at five or six weeks. At three months I should consider the animal tolerably safe; but I have met with two instances, in one of which it occurred so late as the fifth, and in the other after the expiration of the seventh month, and where re-inoculation was not suspected, and was scarcely possible.

There are strange kennel stories of the virus lurking in the constitution of the dog for twelve or eighteen months. I have never met with an instance of this, and I attach to it as much faith as I do to the histories of the very walls of some kennels imbibing the poisonous effluvia of rabies, and to so great a degree that no white-washing could disinfect the building. The quarrelsomeness of hounds, and especially at feeding time, is well known. The dangers to which they are exposed when going to cover, or returning straggling late in the evening, cannot be denied. One village cur may commence the mischief, and it will soon spread through the pack.

The average time of the appearance of rabies in the horse is from one to two months after the bite. I know but one case in which it exceeded four months.

I have seen but one rabid ox; the disease appeared on the twenty-second day after the inoculation. A veterinary surgeon tells me, that, in a case which he attended, the intervening time was five weeks.

In the sheep the shortest period I know was twenty days; the longest, seventy.

Of the swine I cannot speak.

The duration of the disease is different in different animals. In man it has run its course in twenty-four hours, and has rarely exceeded seventy-two. A case is related in the Lancet of July 12th, in which, by repeated bleedings, it was protracted to the fourteenth day.

In the horse it varies from three to four days; in the dog from four to six; and in the sheep and ox from five to seven days.

(To be continued.)

ON THE EPIDEMIC OF THE SPRING OF 1828.

By Mr. Samuel Brown, *of Melton Mowbray.*

To the Editor of The Veterinarian.

Sir,

YOU express a wish, in your sixth Number, that some experienced veterinarian would give you a history of the epidemic catarrhal fever of the spring of 1828. I had hoped that a more experienced practitioner than myself would have given, in your last number, the particulars of this singular disease; but that not being the case, I send you the result of my experience, should you deem it worthy a place in your valuable publication.

The pulse has been generally small and frequent; a difficult and sonorous breathing; an offensive smell; a troublesome and almost incessant cough; great difficulty in swallowing; the schneiderian membrane highly injected, with an inordinate discharge of viscid acrimonious mucus; great enlargement of the submaxillary and parotid glands, with frequent ulceration; considerable debility; loss of appetite; tremor; great irritability, with a disinclination to move. In some cases the fæces were buttony, voided in small quantities, and covered with mucus; in others there was diarrhœa, with a peculiar offensive smell.

In a few instances the pulse was *slow* and small, the eyes overflowing with tears; the schneiderian membrane inflamed, yet assuming a yellow tint, and discharging an immense quantity of viscid mucus; breathing less difficult and sonorous; very lethargic, and partial loss of voluntary motion.

These are the most characteristic symptoms, and the most predominant ones were inflammation of the nose, sore throat, great difficulty in swallowing, discharge from the nose, and ulceration of the glands.

I bled freely at first; gave nauseating doses of aloes; inserted a rowel in the chest; blistered the throat; ordered grass, mashes of scalded bran, and the stable to be cool and clean. In the first three cases, purging occurred on the third day, with the pulse very frequent and small. I then gave a draught of thick arrow-root, with pulv. opii ʒi; pulv. digital. ℈ij; creta pp. ʒij. On the fourth day the purging had stopped; the pulse was rather slower and fuller; the discharge from the nose thicker, and of a blackish yellow colour; the respiration laborious, and the breath fœtid. I gave him tinct. opii, liq. ammon. acct., yeast, infus. anthemid: the

nose was steamed with scalded bran and vinegar; the mouth washed with vinegar and water four or five times a day; and the regimen malt mashes, corn, or whatever would please the appetite.

On the fifth day he was something better, and the draught was repeated. On the sixth day I found him decidedly worse; respiration laborious, and the discharge from the nose excessive; his breathing so offensive, that it was almost impossible to go near him. He died in a few hours, and, being immediately disposed of, no post mortem examination could be made.

A mare belonging to the same gentleman was now taken ill: the symptoms were the same as in the former case; treatment the same, and with no better success. She died on the seventh day.

The schneiderian membrane was found to be in the highest state of mortification, with several ulcers on its surface. A large abscess in the pharynx, full of the most offensive matter. The membrane lining the pharynx, larynx, trachea, bronchiæ, and air cells, had the same morbid appearance. The substance of the lungs was not in that high state of mortification which is often met with after active inflammation, but contained several abscesses. The pleura very much inflamed, and the cavity of the chest filled with a mixture of serum and pus, having a very putrid smell.

The result of these cases was very mortifying to me; and, seeing that the disease was increasing in the neighbourhood, and not yielding to the usual treatment, I determined to adopt a different course of practice. I refrained from bleeding and rowelling; I supported the patient by liberal diet; and in those cases where the fæces were buttony, I gave ext. hyoscyami, liq. ammon. acet., sp. nitr. æther, and infus. anthemidis. I blistered the throat; ordered it to be gargled with the decoction of elm bark with honey, and a small portion of vinegar; the nose to be steamed with bran scalded with vinegar: the regimen bran, oat mashes, and grass; water always to be within the animal's reach, and every attention to be paid to cleanliness. When diarrhœa appeared, I gave tinct. opii, sp. nitr. æther, creta pp., and infus. anthemid; ordered malt mashes, dry bran, with oats and hay; and where there was any tendency to putridity, I joined large doses of opium and yeast. Where the discharge from the nose had continued a long time, accompanied with debility and loss of appetite, I gave the acet. muriat. and sp. lavandul. compos. largely diluted with water. This had a very salutary effect: I have since treated more than forty cases, and, with this treatment, all have recovered.

Observations. I am of opinion that this epidemic was primarily an inflammation of the mucous membrane of the pharynx and larynx, as was manifest in the post mortem examination of the

second case; and I have been informed by the knackers, that, in several instances, the pharynx and larynx were a complete mass of inflammation and gangrene, with but little appearance of disease in the trachea or lungs. It has attacked all ages, in the stable or at grass,—situated on a hill or in a vale,—drinking from stagnant pools or fresh water.

I hope that some more enlightened veterinarian will favour you with a better history of this peculiar disease.

We thank Mr. Brown for this account of the disease which prevailed in his neighbourhood, and particularly for his candid and satisfactory narrative of the treatment which he adopted. The epidemic so frequent and so fatal in London and its environs bore a different character, and required different treatment. We trust that some of our town veterinarians will favour us with a history of it. EDIT.

THE VETERINARIAN, AUG. 1, 1828.

"Licet omnibus, licet etiam mihi, dignitatem *artis veterinariæ* tueri."—*Cicero.*

TO preserve the lives of his Majesty's subjects, and the respectability of the medical profession, it has been deemed proper, in most civilized countries, that the competency of the medical pupil should undergo a strict examination before he is permitted to practise his art. We are willing to allow that similar, although not so cogent reasons demand that the veterinary pupil should pass through an ordeal of the same kind.

Horses, sheep, and cattle have feeling,—they are valuable to their owners, and they should not be wantonly tortured or destroyed; nor should the veterinary art, so intimately connected with medical and general science, be disgraced by the brutality or ignorance of the mere pretender.

If the qualifications of the candidate for practice are to undergo this necessary scrutiny, the examination should be con-

ducted by persons capable of coming to a just decision—by those who perfectly understand the subject. It would be an insult to common sense, and an injustice to the party examined, if any but those who were masters of every point of principle and of practice were permitted to occupy the inquisitorial chair.

What is the constitution then of the medical examining committee of the Royal Veterinary College? Do they perfectly understand the anatomy and diseases of the animals on which the candidate professes to practise? Will their education, their enquiries, their opportunities, give them this knowledge? In point of fact, do they possess it?

They are gentlemen who, as human physicians and surgeons, stand in high and just estimation. They are the pride of their own, and the admiration of neighbouring countries. They are men of deep science, and strict integrity. The medical pupil could not appear before a more competent or honourable board.

But they are *veterinary* examiners. They have to decide on the qualifications and attainments of *veterinary pupils*. They are to determine whether the treatment of the diseases of the horse and other domestic quadrupeds can be safely entrusted to these young men.

Then it is as plain as the sun at noon-day, that, fairly to determine this, they *should* be thoroughly acquainted with the symptoms of these diseases, the indications of cure, and the means of accomplishing these indications. Well, then, we will take one of these gentlemen into our stable (let each of them as he reads apply it to himself): "My horse is very ill," we will say to him; "he is off his feed, he shivers, he heaves, he paws: what is the matter with him? Is it simple fever, or pneumonia, or enteritis, or nephritis? What shall I do with him? What shall I give him? Will he die or live?"—"Really, my dear sir, I don't know. I don't understand the diseases of horses. I can't tell you any thing about it."—"Then, my good sir, who made you a veterinary examiner? By what magic can you decide on the capacity and skill of the veterinary pupil? or what right have you at that board?"

We would go on to address him, and let our examiners listen and reflect, and answer us as they can. "You will acknowledge to me, that the surgeon is not at all times a fair judge of the

competency of the physician, nor the physician of the acquirements and skill of the surgeon, although they practise on the same patient, and agree as to the symptoms of disease, and the indications of cure, and the general mode of treatment. Is it not, then, somewhat presumptuous in you to sit in judgment on the veterinary surgeon, who practises on diseases with which your patients are never affected, who distinguishes the diseases which are in common by symptoms very different from those which would guide you, and who accomplishes the indications of cure by means which your philosophy would never have dreamed of?"

The writer of this article, about a twelvemonth ago, was requested to call on a medical gentleman, who is truly an honour to his profession. It so happened that he could not attend for several hours. One of his carriage horses had not been well for two or three days. The animal was now unwilling to move: there was a slight staggering uncertain gait when he did move, and the pulse was slow, creeping, and hardly to be felt. The skilful surgeon, but unpractised in horses, sufficiently, as he thought, recognised a state of debility; and as the veterinarian did not come, and it was uncertain when he would, he administered a cordial.

The doom of the animal was sealed. The disease was pneumonia—the apparent weakness was oppression—the creeping pulse was congestion;—and in less than two days the horse was dead.

In November 1824, two of the servants of a gentleman, ranking high in the scientific world, were bitten by a dog, under some suspicious circumstances. A veterinarian was called in, who at once decided that the dog was rabid, and urged that the domestics should immediately submit to the proper preventive means. The gentleman without delay applied to his intimate friend, *one of the veterinary examining committee*, an excellent comparative anatomist, the very head of his profession, and a co-fellow with him in many a learned society. He looked at the dog for a moment, and most strangely declared that it was not half so mad as the veterinarian.

What was to be done? The lives of two human beings were at stake. The gentleman could scarcely doubt the judgment of

his friend, from whose opinion he knew that few of his profession would dare to dissent; and yet he had some confidence in the veterinarian, whom he had for some years known and employed.

He summoned a sort of medical council; and half a dozen gentlemen, eminent in their profession, met at the desire of their associate and friend to hear and to decide.

The question to be determined was a kind of border ground between the veterinary surgeon and the practitioner of human medicine. The symptoms of rabies in the quadruped ought to be well understood by both; by the one, because the animal was his patient; and by the other, that he might not inflict unnecessary pain on the person by whom he was employed, or expose him to dreadful danger by the neglect of proper precautionary means.

The sages had assembled. The member of the veterinary examining committee had just arrived. He was explaining the case. "It was simply furor uterinus, but he understood some person had *presumed* to give a different opinion. He should like to see this person." The poor veterinarian was at that moment entering the room. He felt himself somewhat aggrieved. He was put upon his mettle, and, in the declared opinion of the whole party, he fairly beat his formidable antagonist on every point; and on the following day, when a question of morbid anatomy was warmly contested, one of the first anatomical teachers in the metropolis was sent for, who unequivocally decided in favour of the humble veterinarian.

We would refer to the excellent Dr. Jenner's account of the distemper in dogs and grease in horses, no more like those diseases than gout to scarlatina, for another proof, if proof were wanted, of the incompetency of human practitioners to decide on veterinary subjects.

But are not some of the examining committee excellent anatomists? and have they not devoted much time and thought to the study of *comparative* anatomy? Most certainly, and yet we much doubt their fitness even here. Take the larynx of the horse, the ox, the dog, different from the human subject, and from each other. We rather suspect that a shrewd pupil might puzzle the best of them. Take the extensor apparatus of the fore extremities of the horse, the ox, and the dog. If we were the

examiners, and they the pupils, we should not want an excuse for turning them back for a few months.

The teacher of anatomy or medicine in the metropolis (for to him, it seems, the office of examiner is to be confined) is *peculiarly unfit* to decide on the merits of the veterinary pupil. Brought at an early period from the country, and, for many a laborious year, his time divided between the dissecting room, his study, and his practice, and, after that, his pupils and his patients occupying him, and often painfully occupying him wholly, he is, least of all persons, a *horseman*. He is perfectly ignorant of the points, the qualities, the habits, the treatment of the horse; and with all his medical attainments, if he presume to interfere with the management of his stable, he is the laughing-stock of the most illiterate groom.

Mr. Coleman tells us in his introductory lecture (wrongly we think), that the human surgeon, even after he has honestly and diligently studied in the school of animal medicine, makes a bad practitioner, and rarely succeeds; and, yet, they whose want of time and whose habits forbid their acquiring the slightest practical knowledge are competent veterinary examiners.

But the professor or his assistant are with them, who are assuredly competent to decide. Do, then, these human practitioners need this controlling and guiding power? Capable only of ascertaining the knowledge and possession of general principles, must they depend on others for the proper application of these principles to peculiar cases? Then they are not qualified for their office. They should be enabled to decide fully, fairly, uninfluenced, unprompted, unguided.

The professor and his assistant! Have we a sufficient guarantee that their opinions on many points of veterinary physiology, and many more of medical treatment, shall always be perfectly correct? Is it not an undoubted fact that the treatment of several diseases adopted by the college, and perhaps necessarily adopted, from the original faulty constitution of the school, is advocated by no writer, and is uniformly changed and discarded when the pupil gets into practice; and must be so, or he would inevitably starve?

Have we always, or, while human nature and human weakness remain as they are, *can* we have a sufficient guarantee, that the professor and his assistant shall have no favourites to put forward,

no supposed enemies to thwart; or that, unknowingly and undesignedly influenced by prejudice, they may bestow their diploma on the ignorant, and refuse it to the deserving?

We will not, we do not imagine that flagrant injustice would or could be committed by honourable men; but we do recollect, many a year ago, that the decisions of the examining committee were occasionally passing strange. We have seen those with whom we had dissected, and read, and conversed, and closely studied month after month, whom we knew to be indefatigable, and believed to be competent, turned back; while others (we had repeatedly *ground* one person now in our mind's eye), who knew neither the number nor the relative situation of the humours of the eye, and to whom we would not have entrusted the treatment of a poor ass, passed without difficulty. It could not be that the former had thought for himself, and would not blindly subscribe to any creed, and that the other had got by rote certain answers to certain questions on certain points.

We will not speak of the impression, injurious and too lasting, which might be made on our minds, and those of others; but these cases of undesigned injustice must necessarily occur, when the majority of the examiners can only enquire into general principles, and are guided in the application of them to the domestic quadruped by one, or their prejudice in favour of the opinions of one, highly talented indeed, but liable to error.

Is it necessary further to urge a case so plain? How came these gentlemen to be appointed to this important office? At the establishment of the college there were no veterinary surgeons. Before the art had been taught among us there could be none sufficiently instructed, and the governors were obliged to be content with the best examiners they could get,—human practitioners, deservedly eminent in their own profession, to whom the college was indebted for its very existence, and who were most anxious for its success. It was not dreamed of, that they who were elected, because better men could not be procured, should continue exclusively to occupy the examiners' board, when hundreds of veterinary surgeons were distributed through the kingdom.

Among all these, are there none sufficiently honourable and well

informed to decide on the qualifications of the veterinary pupil? If there are none, then the present board of examiners have not done their duty, or, rather, have proved themselves altogether incompetent. Have they dignified with diplomas so many, and not one good man and true among them all? This must betray carelessness or ignorance without parallel and without excuse. If there be veterinary surgeons, an honour to their profession, understanding the fundamental principles of physiology and pathology, and that which, with all their acquirements, the present examiners do not,—the application of these principles to the treatment of the domestic quadruped,—a flagrant act of injustice is done to them and to the country if they are deprived of that which would be the dearest reward of their labours, the public acknowledgment of their worth, and a voice in the direction of the affairs of their profession.

These gentlemen, then, whose skill in their own department of medical practice malice cannot depreciate, and the remembrance of what we owe to them, time will never obliterate; do we wish to push them from their stools? No! no! The association of their names ennobles our humbler profession. But we will tell them, that they are neither consulting their own respectability, nor the interests of the veterinary profession or of their country, when they appear to cling thus tenaciously and exclusively to office, and resolve to exclude us from that situation which we alone can competently fill.

Are there well instructed and duly qualified veterinary surgeons, or are there not? If there are, why will you continue to do them wrong? If there are not, then shame on the system which has been so long pursued; and fie on their negligence and want of penetration who have filled the country with mere pretenders.

The truth of the matter is, that our education has been so limited in its objects, and so much more and indefensibly limited in the period devoted to it, that we do not possess and cannot claim that estimation to which the importance of our profession would entitle us. We are, and we painfully feel it, far, far below the human practitioner in general acquirements and in public opinion. We are not deemed worthy to associate with the practitioners of human medicine; and yet we have sometimes thought, that there

are a few at least among us, who, without too great condescension, might be admitted into the conclave, and the honour conferred on whom would be reflected on and felt by us all.

Time, which effects many changes, will here, and speedily effect an important change. Our veterinary periodicals will diffuse among us much important knowledge. Our veterinary societies will bring us more together, and kindle a more ardent zeal for the improvement of our art and the respectability of our profession; and, at no distant period, the force of public opinion will give us that which we now indignantly claim as our right, and which every other profession enjoys, and which, in every country but ours, is yielded to the veterinary profession,—the distribution of honours and privileges among our brethren, of whose merit we alone are, and can be, adequate judges.

Review.

" Let me suppose you have surmounted the teasing employments of printing and publishing, how will you be able to lull the critics; who, like Cerberus, are posted at the avenues of literature, and who settle the merits of every new performance?"—*Goldsmith.*

A TREATISE ON INGUINAL HERNIÆ IN THE HORSE AND OTHER MONODACTYLES.

By GIRARD, *Director of the Royal Veterinary School at Alfort.* 4to, pp. **145**, *with Lithographic Plates. Paris,* **1827**.

(Continued from page 254.)

IN wishing to impress on the minds of our readers that stallions are the ordinary subjects of inguinal hernia, and, according to our author, "those especially in the habit of covering,"—according to our own experience, those especially in the practice of racing,—we do not remember to have seen or even heard or read of a single case of the kind occurring in the *mare*. One obvious reason for this exemption is the narrowness of the abdominal ring in the latter, inasmuch as the round ligament is inconsiderable in volume and importance compared to the chord. We may also ascribe some influence, probably, to the presence of the vagina and uterus, and

to the elevation of the pelvis, which is said to predominate in the female; both these circumstances having a tendency to incline the bowels forward against the diaphragm.

I.—OF RECENT ENTEROCELE.

This first variety of intestinal hernia almost always makes its appearance abruptly, and hastens on to become strangulated. Rarely, however, its descent is slow and imperceptible, in which case the hernia continues a longer or shorter time in concealment, not becoming detectible until it has made certain progress and given rise to certain indicative disorder. The symptoms marking its presence are, indisposition to work, head elevated, appetite impaired. Suffering increasing, he breathes deeply, paws and turns himself in different postures in trying to obtain relief: at times the symptoms resemble those of over-fatigue. Occasionally the gut returns of itself, and the animal all at once is restored to ease, without our even having known the cause of his disquietude: rarely, however, is it that a first is not followed by a second protrusion, that by a third, and so on, until the hernia becomes permanent, and progressively acquires considerable volume.

Generally speaking, we may trace the accident to some sudden effort or extra exertion, and it is always judicious to make this inquiry. Every respiratory effort, the very expressions of pain themselves, have a tendency to augment or confirm the disease. Knowing this, it will be our care in the interval of quietude (under the impression of a spontaneous reduction having taken place) to avoid every cause of disturbance.

At every relapse the same symptoms re-appear; then the pulse becomes thready, the eyes red, pupils dilated; inflammation invades the irritated parts; slight colics, continued or intermittent, come on; the testicle on the hernial side is drawn up, irregularly descending and ascending with more or less force, according to the pain experienced; a pathognomonic symptom demanding the most serious attention, and one that ought to prompt the veterinarian to examine into the state (natural or intumescent) of the inguinal canal.

In this manipulation, which can leave no doubt about the presence of bubonocele, both hands are employed; one is introduced into the rectum, the other into the sheath. The one within the rectum must seek the internal ring; while the other, pursuing the course of the chord on the side affected, is to be pushed up to the external ring; and thus, in the natural state, the opposed fingers may be made nearly to meet, and so estimate the size of the opening. However small the protruded portion of gut, the practitioner will be able to detect the bubonocele, and even to reduce it, by proceeding *secundum artem*, and taking the necessary precautions, to be hereafter pointed out. This exploration may be made in the standing posture; but it will be conducted with more facility and certainty if the animal be cast, which is by far the preferable mode of proceeding.

This is a branch of surgery about which, among our veterinarians, so little appears to be known, or at least is one so seldom if ever put into practice, that it opens to us quite a new field of operation. We may be told, that we have no occasion to make

it our study. We would remind those, however (if any practitioners there be), disposed to remain in peaceful ignorance of all this, that there are on our surgical records already too many melancholy instances in which death has followed the operation of castration, in consequence of the operator being unaware of a latent inguinal hernia, and his probable total ignorance, or at all events neglect of a mode of examination which in certain suspicious cases it was his duty to institute, seeing that such a procedure alone could guide him in forming a safe diagnosis. For the examination, we should certainly prefer the erect to the recumbent posture—affording as much room as possible for exploration, by extending and abducting the hind legs: we prefer this position, because the simple question in such a case is, whether hernia exists or not; its nature and reducibleness become a subsequent consideration. Should hernia exist, and not be at once reducible, let us see in what manner our author recommends the employment of the taxis.

The horse is to be thrown upon the opposite side to that disordered; and, after one hind leg has been drawn and fixed forward as for castration, he is to be turned upon his back, and in that position maintained by trusses of straw, while other trusses are placed under him to raise the croup. With both arms well oiled, or covered with some mucilaginous decoction, the operator will now commence his exploration, taking the precaution of emptying the rectum as he proceeds. As soon as he shall have ascertained that it is a case of hernia, and assured himself that the gut protruded through the ring is undergoing neither stricture nor strangulation, he may endeavour to disengage the hernial part, by softly drawing it inward within the cavity, at the same time pushing it in the same direction with the hand within the sheath. Should he experience much difficulty in these attempts, he is to desist, violence being too often the forerunner of strangulation and gangrene. He must bear in mind, also, that although the reduction is effected, unless it be followed by immediate castration, it does not always prove to be a cure for bubonocele: the protrusion recurs after a time, and occasionally even the moment the animal has risen.

Should it so happen that the hernia reappears "the moment the animal has risen," we apprehend that the performance of castration would be an operation rather to be regretted than otherwise; for, should the protruded viscus by any chance descend into the scrotum, the latter being open at the time, what might such an unfortunate event lead to? Would it not be more advisable, in the case of reduction having been effected, to defer the operation of castration until the stability of such reduction could be determined on?

The hernial tumour is soft, more or less voluminous, and is either elastic and salient under the pressure of the fingers, or else possesses consistence and weight; and fluctuates or piths, according as it contains gaseous or stercoral matters, the latter giving it at times a solid, irregular, lumpy feel.

When the gut is so closely embraced at the neck of its peritoneal sheath

that all passage through it is interrupted, the hernia is said to be strangulated, an event indicated by the rapid aggravation of all the symptoms. Occasionally the gut is merely nipped or pinched at the ring, forming a swelling about the magnitude of a nut; but in other cases a part of it enters the canal, in which matters accumulate, and distension and gangrene follow.

One characteristic of a hernial swelling is here omitted, and that is, the sense of fluctuation or pulsation given to the tumour when the animal coughs, which he can at any time be made to do by simple compression of the throttle; indeed, so remarkable is this effort, that, should the hernia be by manipulation actually or apparently reduced, nothing is more likely to cause it to return than a sudden or violent fit of coughing. We repeat, therefore, and we think with reason, that this is an important circumstance, and one that ought to be attended to.

A horse suffering from recent strangulated hernia is seized with colic, which rapidly becomes aggravated, and only ceases some moments before death, on the gut becoming gangrenous. The alternate ascent and descent of the testicle follow at first in quick succession, the intervals after a time growing longer, until at length that organ continues long drawn up, and finally ceases to reappear. The symptoms of colic change rapidly to those of the most alarming description: he lies upon his back, a position in which he finds temporary relief; he writhes, while in the erect posture, and, fixing his fore feet, crouches almost to the ground with pain; he breaks out into a profuse sweat; and, instead of sinking to the ground, as happens in ordinary enteritic cases, he falls all at once like a lifeless mass. The violent spasms may terminate in vomiting, and that occasion rupture of the stomach, as occurred in M. Languenard's case.

M. Girard himself has also published a case of this kind, in which vomiting was present, although it was not followed by any organic lesion, which we take to be a rare occurrence. The case (which will be found in the *Memoir on Vomition*, appended to M. Girard's Treatise of Anatomy) was one of strangulated intestinal hernia: "the animal survived but three days, during which his sufferings were extreme. Some moments before he sunk, *he vomited at several ejections a pretty considerable quantity of fluid*, consisting of the beverage which had been given to him."

(To be continued.)

PRIZE ESSAY, *to be sent on or before the* 15*th of October:*

The Fore Extremity of the Dog.

Extracts from Journals, Foreign and Domestic.

MONSTER PRODUCED BY A COW.

THIS singular monster, born at Wagendrussel, in the county of Zips, in Hungary, is described by Dr. D. Schreiter: it was extracted, living, from a cow, in April 1825, and killed immediately. A tradesman kept it, and eight days after a judicial examination of it took place. Its length, from head to the anus, was three feet (Vienna measure), and it was two feet in height. The head was larger than, but *strangely resembling that of a man.* The space comprised between the coronal suture and chin measured ten inches. The frontal and parietal bones were separated by a fontanelle. The sagittal suture was an inch long; and this region was covered with yellowish brown hair. On each side there was a small human shaped ear, the lobe of which terminated in a calf's ear, three inches long. The face was entirely smooth, and without hair. The eyes blue, the eye-brows the colour of the hair. The nose was flattened at the end, and the nostrils wide. The upper jaw, without teeth, was terminated by a lip, as in man; the lower lip, having ten pointed teeth, had more analogy to that of a calf. On the chest were two hemispheric breasts, projecting about half an inch, with prominent nipples; the thorax and buttocks resembled the human, only the body was rather longer in proportion to the limbs; to the lumbar vertebræ succeeded a tail, 8 inches long, under which the female genital organs were situated. The udder was situated between the buttocks. The limbs, which were naked as far as relates to the arms and thighs, were otherwise covered with hair, and terminated by the feet of a calf. —*London Medical Gazette, from Bull. des Sci. Med. Mar.* 1828.

Veterinary Medical Society.

WE have great pleasure in inserting the Laws of the Veterinary Medical Society, and a list of its members, honorary and ordinary, at their third meeting. While it is devoted to the pursuit of veterinary science, and the improvement of veterinary practice, we are confident that every practitioner who has the interest of the profession at heart, will most cordially join it.

Its meetings for discussion will commence on the first Wednesday in October, but, in the interim, the members will assemble at eight o'clock in the evening on each alternate Wednesday, to receive propositions, and to prepare for the opening of their regular session.

Letters and propositions may be addressed (post paid) to the Secretary pro temp. at the Veterinary Theatre, Nassau Street, Middlesex Hospital.

Laws and Regulations of the Veterinary Medical Society, confirmed at their second General Meeting, at Mr. Youatt's Veterinary Theatre, in Nassau Street, on Wednesday, July 2d, 1828:—

1. The object of the Society shall be the advancement and diffusion of Veterinary Knowledge, by the discussion of subjects connected with Veterinary Practice.

2. All persons engaged in the study or practice of Veterinary Medicine are eligible to be ordinary members.

3. Candidates for admission as ordinary members shall be recommended by Letter, signed by three members, and in the following form:—

(DATE)

We, the undersigned, do, from our personal knowledge, recommend Mr.
residing at *as an ordinary member of the* VETERINARY MEDICAL SOCIETY.

4. This letter, being presented at any regular meeting, shall be publicly read by the Secretary, and notice shall be given by the Chairman that the ballot will take place on the second subsequent meeting; and in the intermediate time the name of the Candidate shall be suspended in the place of meeting.

5. Two black balls shall exclude, if the number of members present be less than twenty. Three black balls shall at all times exclude.

6. The Member thus elected shall receive due notice of his admission from the Secretary, and on the third night of meeting, at the latest, after his election, shall attend, and pay to the Secretary the admission fee of One Guinea.

7. If he neglect to attend and pay his fee within the time specified, the election shall be declared void, unless an excuse, in writing, satisfactory to the Committee, be previously received; or unless he reside more than five miles from the place of meeting, when his personal attendance shall be dispensed with.

8. A candidate once rejected shall not be proposed again until the next session.

9. A Copy of the Laws, and a List of the Members, shall, during every Meeting, be laid on the table for immediate reference.

10. Those medical gentlemen whose theatres are gratuitously open to the Veterinary Students, and likewise the members of the Veterinary Examining Committee, shall be eligible as, and invited to, become Honorary Members.

11. Physicians or Surgeons of eminence, who have distinguished themselves for their researches in comparative anatomy, and Foreign Veterinary Surgeons, are eligible as Honorary Members. They must be proposed in the usual way, and elected by ballot.

12. No admission fee shall be required from an Honorary Member.

13. The Officers of the Society shall consist of a President, four Vice-Presidents, a Treasurer, a Secretary, and a Committee of six Members.

14. The President shall be elected by ballot on the first night of every session, and shall be exempt from fine.

15. The four Vice-Presidents shall likewise be elected on the same evening.

16. The Vice-Presidents shall, in the absence of the President, take the chair in rotation; and if the gentleman whose turn it may be shall be absent at Seven o'Clock, he shall forfeit the sum of Half-a-Guinea, unless he have deputed one of the other Vice-Presidents to act in his stead.

17. Six Members shall likewise be elected by ballot on the same evening, to constitute a Committee.

18. The President, Vice-Presidents, Treasurer, and Secretary, shall be ex-officio members of the Committee.

19. The nomination of Treasurer and Secretary, the consideration and enactment of new Laws, and the general Management of the Society, shall be vested in the Committee.

20. An appeal to the Society at large against any act of the Committee must be signed by six members, and delivered, in writing, to the President of the evening, before Nine o'Clock, who shall announce the same for consideration at the next ensuing meeting.

21. The Committee shall assemble as often as they may deem necessary during the session, or a special meeting may be called by any six members. The Secretary shall issue the summonses, giving at least three days' notice.

22. No alteration nor addition to the Laws shall be made by the Committee, unless seven members present shall vote for it, and notice of such proposed alteration or addition shall have been previously sent to every member of the Committee.

23. Members desirous of suggesting alterations or additions to the Laws must send the same, in writing, to the Committee, who shall take such communication into due consideration, and report the result of their deliberation to the Society at its next meeting.

24. The Treasurer shall receive from the Secretary all monies paid to the Society, and shall defray any expense incurred during the session; but he shall not pay any sum to the amount of more than One Guinea without the previous order of the Committee.

25. The accounts having been previously audited by the Committee, a full statement of them shall be laid before the Society on the first meeting in every month.

26. The Secretary shall attend personally, or by deputy, at every meeting of the Society; and in person on every meeting of the Committee, under the penalty of Five Shillings for each absence.

27. The Secretary shall take minutes of the proceedings of the Society and Committee, and issue such letters and summonses as they may direct.

28. The ordinary meetings of the Society shall commence on the first Wednesday in October, at Seven o'Clock in the Evening; and on no occasion be prolonged after Ten o'Clock. The meetings shall be held on each alternate Wednesday, and shall terminate on the last Wednesday in April.

29. The Chair shall be taken at Seven o'Clock precisely, and the business shall be conducted in the following order:—

The minutes of the proceedings of the former meeting shall be read and confirmed by the President.

Letters recommending new members shall be read.

Members proposed at the meeting before the last shall be balloted for.

New subjects for discussion shall be received, announced, and entered in the book.

Communications from corresponding members shall be read, and taken into consideration.

The subject for the evening's discussion shall then be brought forward.

30. No subject shall be admitted which is not connected with veterinary science; and each subject shall be discussed in the order of announcement.

31. The subject shall be treated by the Proposer in the form of a written essay, which shall be read by himself or the Secretary, and this essay shall be deposited with the Secretary.

32. On the first Wednesday after the closing of the regular meetings, the Committee shall assemble at the usual hour, and

consider whether it may be advisable to publish a volume or pamphlet composed of such of these essays as they may select, under the title of "*Transactions of the Veterinary Medical Society*," at the expense and for the benefit of the Society; it being clearly understood that the authors of such papers shall likewise have full power to publish them, for their own advantage, in any way they may think proper.

33. Every member who is absent when his subject ought to be discussed, shall forfeit the sum of Five Shillings; and his subject shall be placed at the bottom of the list.

34. No new paper shall be read after Nine o'Clock; but, should the discussion terminate before the usual hour of adjournment, the President may permit any member to relate a case of practice.

35. Should the subjects proposed for discussion be at any time reduced to three, the Vice-Presidents, and the six members elected on the Committee, shall each of them be required to propose a subject.

36. Every member may introduce one Visiter at each meeting, under the following regulation. A card of this form—

(DATE)

Admit *as a Visiter to the*

VETERINARY MEDICAL SOCIETY.

(Signed)

shall be presented to the Secretary, and by him laid before the President for his approval; and, without the approval of the President, such Visiter cannot be admitted. The same Visiter shall not be admitted more than twice in each session.

37. No Visiter shall be allowed to take any part in the debate without permission of the President, and that permission can never extend to any question relating to the affairs of the Society.

38. Any Member or Visiter being called to order by the President of the Evening three times, ineffectually, shall be fined One Guinea. If he persist in such disorderly conduct he shall, if a Member, be expelled, or, if a Visiter, declared incapable of revisiting the Society.

39. Any gentleman who may, from distance of residence or other circumstances, not be enabled to attend as an ordinary member, may be admitted as a corresponding one. The recommendation of one member shall be sufficient, but the ballot shall proceed as for an ordinary member. He shall pay the same admission fee, and shall have the privilege of sending communications and cases, which shall be discussed by the Society in the order in which they are received; but he shall have no voice in the affairs of the Society.

40. Any member wishing to withdraw from the Society, shall give three months' notice of such intention to the Secretary, and shall pay his share of the expenses or debts of the Society to the time of his withdrawing.

HONORARY MEMBERS.

Edward Coleman, Professor to the Veterinary College
Charles Bell, Esq., F.R.S., F.L.S.
Sir W. Blizard, F.R.S., F.S.A.
Dr. Blundell
B. C. Brodie, Esq. F.R.S.
Joshua Brookes, Esq., F.R.S., F.L.S.
Dr. Chambers
Dr. Clutterbuck
Bransby Cooper, Esq.
Dr. Copland
Dr. D. D. Davis
W. H. Dewhurst, Esq.
Henry Earle, Esq., F.R.S.
G. J. Guthrie, Esq., F.R.S.
Dr. Haslam
Sir Everard Home, Bart., F.R.S., F.S.A., F.L.S.
W. Lawrence, Esq., F.R.S.
John Morgan, Esq.
Dr. Nuttall
Dr. Pearson, F.R.S.
Dr. Wilson Philip, F.R.S.
Dr. Roget, F.R.S., F.G.S.
B. Travers, Esq., F.R.S.
Fred. Tyrrell, Esq.
J. W. Vincent, Esq.

ORDINARY AND CORRESPONDING MEMBERS.

Bardell, J. Stephen's Mews
Biggs, B. Basingstoke
Blaine, D. P. M.R.C.S. Newport
Bloxam, S. late 1st Life Guards, Eton
Boutall, John, North-row, Park-lane
Dawson, V. Chiswell-street
Dick, W. Lecturer on Veterinary Anatomy, &c. Edinburgh
Easton, T. Stratford
Fenwick, G. Grosvenor Mews
Field, John, Jun. Oxford-street
Garland, W. Doncaster
Goodwin, W. M.R.C.S. and Veterinary Surgeon to the King
Green, John, M.D. Lewisham
Grover, John, Lewes
Henderson, A. Park-lane, Veterinary Surgeon to the Duke of Clarence
Henley, John, Cheltenham
King, F. Sen. Stanmore
King, F. Jun. Ditto
Langworthy, J. H. Rolls'-buildings
Lythe, John (late Royal Artillery), King-street, Portman-square
Marshall, C. Essex-st. Whitechaple
Morley, A. Old Burlington-street
Moulden, Dan. Winchester
Newport, C. Gray's Inn-lane
O'Connor, C. Royal Artillery, Newmarket
Palmer, J. Crown-street, Soho
Percivall, C. Enniskillen Dragoons
Percivall, John, Senior Veterinary Surgeon to the Royal Artillery
Percivall, W. M.R.C.S. 1st Life Guards
Price, T. S. Rochester
Pullen, G. Lyneham, Wilts
Rawlings, R. Wells
Saunders, Jas. Brentford
Scruby, T. Malton
Sewell, Jas. Brighton
Skelton, Rd. Leyton
Turner, Jas. (late Royal Waggon Train), Regent-street
Turner, T. Croydon
Wardle, East Sheen
Wright, C. S. Nottingham
Youatt, W. Nassau-street, Lecturer on the Anatomy and Diseases of Cattle, &c.

THE

VETERINARIAN.

VOL. I. SEPTEMBER, 1828. No. 9.

ANATOMY OF THE HORSE.

(Continued from page 269.)

III.—THE HEAD IN GENERAL.

WE shall now take a review of the head in its entire or articulated state, making, to facilitate the description, a

Division of it into External and Internal parts.

The External Parts

may be conveniently distinguished into superior, posterior, inferior, and lateral surfaces; and each of these surfaces admits of a further subdivision into cranial and facial regions.

THE SUPERIOR EXTERNAL SURFACE comprehends—

1st.—THE SUPERIOR CRANIAL REGION, in which we find several zigzag denticulated lines, denominated *sutures*, indicating the boundaries and articulations of the several individual bones. In this region, commencing from its anterior limits, we observe *the frontal suture*, formed by the articulation of the frontal bones, surmounted by a transverse serpentine one; *the coronal suture*, showing the line of junction of these bones with the parietal; next, *the parietal prominences*, bounded posteriorly by *the lambdoidal suture*, which joins the occipital with the parietal bones: lastly, forming the posterior boundary of the region, *the occipital crest*.

2d.—THE SUPERIOR FACIAL REGION, continuous, behind, with the last-described region, presents to view, commencing from its posterior boundary, *the transverse suture*, the line of union between the bones of the cranium and those of the face joining the frontal to the nasal and lachrymal bones: continued forwards, in a direct line with the frontal, *the nasal suture*, which unites the nasal bones: this suture runs within a sort of hollow from the bone, on its sides, rising into *the nasal prominences*:

these are bounded laterally by the *lateral nasal sutures*, formed by the junction of the nasal with the maxillary bones, both superior and anterior. *The nasal peak* is the united apices of the nasal bones, projecting forward over *the anterior nasal opening;* which aperture is bounded laterally by the *superior convex surfaces* of the anterior maxillary bones, and in front is oviform and continued into *the superior maxillary symphysis*, through which runs *the foramen incisivum:* lastly, *the superior alveolar processes;* and *the incisive teeth*, ranged in a row and fixed within *the alveolar cavities.*

THE POSTERIOR SURFACE is entirely CRANIAL: it is bounded, superiorly, by *the occipital crest*, and, inferiorly, by *the occipital hole;* it presents *the occipital tuberosity*, and on its sides the broad *posterior occipital depressions*, deeply and ruggedly pitted by muscular attachments; also, projecting from the postero-lateral parts of the foramen magnum, *the occipital condyles.*

THE INFERIOR SURFACE comprises—

1. THE INFERIOR CRANIAL REGION, which is bounded, posteriorly, by the occipital hole and condyles; anteriorly, by the vomer and palate bones; laterally, by the zygomatic arches. Proceeding from behind forwards, we observe—1st, along the median line, *the basilar process*, impressed by *the basilar fissure;* the *condyloid foramina* on its sides, near the roots of the condyles; *a semicircular prominence* denoting its junction with the sphenoid bone; *the body of the sphenoid bone*, its *articulation* with that of the ethmoid, and a small *semilunar portion* of the latter left visible within the crescentic border of the vomer. 2d, On either side, *the occipital styloid process;* between it and the condyle, *the occipital notch;* in front of the notch and root of the occipital styloid projection, THE PETROUS PORTION of the temporal bone—exhibiting, posteriorly, *the posterior mastoid process*, having at its root the external orifice of *the aqueduct of the vestibule;* directly in front, *the auditory process* and *meatus*, at the inner side of which is *the hyoideal process;* behind the meatus are *the mastoid cells;* projecting from the inner and anterior part is the slender *temporal styloid process*, having at its root *the Eustachian opening* and *styloid foramen.* In front of, and rather outwardly to the petrous portion, we observe,—*the anterior mastoid process;* at its root, *the mastoid foramen;* extending outwardly, in front of it, *the glenoid cavity*, bounded anteriorly by *the temporal articular process.* *The foramen lacerum* is the large irregular opening formed by the occipital, temporal, and sphenoid bones, comprehending *the temporo-occipital* and *spheno-occipital hiatus*, and traversed by the internal carotid artery, the jugular vein, the

eighth pair of nerves, and the inferior maxillary nerve. This foramen is bounded in front by the ala of the sphenoid bone, whose borders are joined to the temporal and ethmoid bones by *the sphenoidal suture*. Curving forwards and downwards from the ala is the *pterygoid process;* it articulates along its front part with *the palatine styloid process*, which is comparatively slender and descends beyond it. At the root of the pterygoid process is seen *the pterygoid foramen*, forming one continued passage with the infero-posterior orbital hole.

2. THE INFERIOR FACIAL REGION constitutes the remainder of the inferior surface: it is bounded, posteriorly, by the sphenoid and ethmoid bones; and, anteriorly, by the incisive teeth. Beginning from behind, we perceive,—in the middle, *the broad part of the vomer*, embracing the body of the ethmoid; and its *superior cornua* extending under that of the sphenoid bone, at whose points are found *the spheno-palatine foramina*, which open again under the infero-posterior orbital: anteriorly to this it articulates with the palate bones, both laterally and along their middle—Laterally, *the palatine styloid processes*, and the *nasal* and *palatine surfaces* and *borders* of the palate bones, by which latter is formed *the posterior opening of the nose:* this aperture in its general figure is oval lengthwise, and is equally divided into two semilunar halves by the shaft of the vomer, about one-third of whose length is seen through the orifice. Farther outward, on the sides of this opening, *the maxillary tuberosities;* immediately above them, *the maxillary hiatus* or entrance to *the posterior palatine foramen, the infra-orbital canal*, and *the anterior palatine conduit;* extending forward from the tuberosities in parallel lines, *the alveolar processes* and *cavities* for *the twelve superior molar teeth;* from which project inward *the palatine processes* belonging to the same bone, joined by the palate bones above, and *the palatine processes of the anterior maxillary bones* below: these parts, altogether, constitute *the bony palate*. The anterior third of the palate takes the name of *interdental space;* it is, in fact, a longitudinally oval interval, which is incompletely filled by the anterior palatine processes. At the junction of the contributing portions of the palate and maxillary bones to the palatine arch, opposite and near to the last molar tooth, is *the palato-maxillary foramen;* from which takes its rise *the palato-maxillary canal*, which courses the roots of the alveolar processes, and conducts an artery of the same name forwards. Along the middle of the arch runs *the palatine suture*, uniting the palate and superior and anterior maxillary bones of one side to their fellows on the other. At the external borders of the interdental space, formed by the superior and anterior maxillary bones, are *the alveolar cavities for*

the tusks, commonly nearer by about one-third to the corner incisive than to the first molar teeth. *The symphysis of the superior maxilla* continued in a line from the palatine suture; pierced by the lower opening of *the foramen incisivum*, which is situated at the roots of the anterior palatine processes, and gives passage to the palato-maxillary arteries. The anterior maxillary surface is vaulted in front, to extend the superficies of the palate. In conclusion, we have *the inferior alveolar processes*, *alveolar cavities*, and *inferior surfaces* and *faces of the incisive teeth*.

EACH LATERAL SURFACE INCLUDES—

1. THE LATERAL CRANIAL REGION, which is bounded, posteriorly, by the occipital crest and condyloid process; anteriorly, by the orbit. It presents to observation—*one side of the occipital crest*, descending to the base of the styloid process, whence a sharp ridge extends from it to the zygomatic crest, which ridge forms the inferior boundary of *the temporal fossa*. *The external side of the occipital styloid process*, roughened from the attachment of the stylo-maxillaris. THE PETROUS PORTION of the temporal bone, locked in between the squamous portion of the same and the occipital bone, comprising—*the mastoid process*, in apposition with the base of the occipital styloid process behind, and with *the descending plate* of the squamous portion in front. Within a circular space formed by this plate behind, and *the anterior mastoid process* before, protrudes *the auditory process*, to which is attached the external ear: it is perforated by *the meatus auditorius externus*, whose orifice is expanded or trumpet-shaped. *The temporal zygomatic process* is continuous, posteriorly and inferiorly, with the anterior mastoid; at which part its surface is excavated to make room for the attachment of the external ear: from this the process curves upwards and outwards, and subsequently forwards, in the form of an arch, meeting on the outer side of the orbit with the zygomatic process of the malar bone, and articulating with it through *the zygomatic suture*, the two completing *the zygomatic arch*, against which abuts *the frontal arch*. *The zygomatic crest* and *the articular process*, the one rising the other descending from the temporal part of the arch, are also observable.

2. THE LATERAL FACIAL REGION extends from the orbit to the incisive teeth. It is partially and very unequally divided into superior and inferior parts by *the zygomatic spine*, which arises from the infero-external and anterior part of the arch of the same name, reaches forward about one-third of the length of the face (measuring from the orbit), and ends abruptly: the inferior part is occupied by the masseter, to which the spine gives attachment; the superior, by much the most extensive surface, exhibits—a little

higher than its middle, *the infra-orbital foramen;* near the inner angle of the orbit, *the lachrymal tubercle;* between the foramen and the tubercle, *a depression* marking the attachment of the nasalis longus labii superioris; anteriorly, *a superficial hollow,* denoting the place of attachment of the caninus: besides these, various other muscular impressions are perceptible. *The sutures* displayed upon this surface, are—*the lateral nasal,* extending from the transverse suture to the lateral opening of the nose, and uniting the nasal to the lachrymal, and superior and anterior maxillary bones; *the malar suture,* running transversely downward and outward from the lateral nasal, and connecting the superior maxillary to the lachrymal and malar bones; *the lachrymal suture,* extending perpendicularly backward from the malar, and continuing its course within the orbit, uniting the lachrymal and malar bones; *the maxillary suture,* extending obliquely, forward and downward, from the anterior part of the lateral nasal, and joining the superior and anterior maxillary bones. Superoanteriorly (in relation to this surface) we perceive one of *the lateral openings* of the nose, bounded in front by *the nasal peak,* behind by *the superior* or *convex border* of the anterior maxillary bone. In front of this border, the bone shows the surface for the attachment of the depressor labii superioris. From the inferior parts of this region project *the molar, canine,* and *lateral incisive teeth.*

Communications and Cases.

Quidquid agunt *Veterinarii*
——— nostri est farrago libelli.

ON THE WORM IN THE EYE OF THE HORSE, AND ON THE KUMREE, OR WEAKNESS OF THE LOINS, IN HORSES IN INDIA.

To the Editor of The Veterinarian.

Sir,

The following Essay was presented to the same society as that of Mr. Twining. If you deem it worthy a place in your journal, you are at liberty to publish it.—I am, Sir,

Robert Molyneux,
Veterinary Surgeon.

Aug. 13, 1828.

" INFLUENCED by the same motives which actuated W. Twining, Esq. to present to the Medical Society some observations on the filaria or thread-worm found in the eyes of horses in India, I beg leave to trouble the Society with a few remarks on that subject, as well as on the disease termed kumree, or weakness of the loins.

" I have frequently seen in the abdomen of horses, and mesenteric veins of asses, worms similar to the filaria: those of the abdomen of horses I have found within the intestinal canal, as well as on the surface of the peritonæum; and it does not appear that any part of the peritonæum is exempt from them. I have made numerous examinations of the lumbar vertebræ and muscles of horses affected with kumree, but never detected worms of any description in the cellular tissue.

" The first appearance of the worm, with the usual symptoms of inflammation, is precisely as stated by Mr. Twining. As a cure cannot be expected without an operation, I shall pass on to the mode of performing it.

" The operation, I think, ought to be always undertaken with reference to the description of horse affected. As draught horses do not require vision backwards, I would recommend a puncture to be made in the superior and posterior part of the transparent cornea, a little more than a line's breadth from the sclerotic coat. By selecting this part, the speck that remains will be less likely to impede vision than if the operation was performed on any other part. On the other hand, in saddle horses I would choose the superior part of the cornea, about the same distance from the sclerotic coat, and in a line with the centre of the pupil. These parts will appear to the members of the Society to be the most proper, when they consider that a horse's eye is so formed as to enable him to see forwards and backwards, on a line with himself, and a little upwards and downwards; and that in draught horses seeing backwards is entirely prevented by the application of the winkers, and in saddle horses seeing upwards is the least required.

" As to the instrument: I generally use a trocar of the smallest size, with a little tow rolled tightly round the perforator, leaving naked at the point about the 12th or 14th part of an inch. From experience I find, that by operating with this instrument, the remaining speck will be smaller than if the lancet is used. I have frequently performed the operation on sound eyes, with the view of ascertaining this point, and the result has invariably been as I have stated.

" Mr. Gibb is in the habit of performing the operation while the horse is standing. This I was aware of previous to my

seeing Mr. Twining's publication. I, however, never performed it until the horse was cast. It appears to me that both ways have their advantages, and much depends on the confidence of the operator.

" After the operation it will be necessary to bleed and purge, not only to prevent any symptomatic affection, but to assist in reducing the local inflammation. Local bleeding, and the continual application of cold water, ought also to be resorted to. When the inflammation subsides, it will be necessary occasionally to blow a little common salt, or any other stimulant, into the eye, to cause absorption.

" If the worm does not escape with the aqueous humour on the first attempt, it will be necessary to repeat the operation as soon as it is again visible, which will generally be on the first, or, at most, second day after the operation: by this time, also, the aqueous humour will have accumulated. It often happens, that immediately after the escape of the aqueous humour the worm dies in the eye; in which case it will be absorbed like any other foreign matter, and the eye again become clear.

" This concludes what I have to say on worm in the eye. I shall now make a few observations on what appears to me to be the causes of weakness of the loins; and in presenting them to the Society, I beg to say, they are founded on experience, numerous dissections, and experiments on horses affected with the complaint.

" My attention was first directed to the spinal marrow, but more particularly to that portion within the lumbar vertebræ, as well as to the vertebræ themselves, and lumbar muscles. I have destroyed many horses affected with the complaint, with the view of ascertaining its cause; but I have not yet observed any animalculæ either about the vertebræ or cellular tissue connected with them.

" In the course of my dissections I have met with one solitary instance in which the cause appeared to me to be satisfactorily obvious. It is necessary for me here to state, that horses when cast sometimes have the transverse processes of the lumbar vertebræ, from violent exertion of the hinder extremities, fractured and partially displaced. When this happens, anchylosis of the processes succeeds, which occasionally extends to the body of the bone, in which case the intervertebral cartilages are absorbed, and ossific matter deposited in their stead. This ossific matter, pressing on the theca of the spinal marrow, and on the nerves as they pass out, will produce the disease, or one similar to it. I state this by way of illustrating one cause of the complaint, but more particularly the cause just now alluded to. In the above-men-

tioned case union was so complete between the first and second lumbar vertebræ, that I was necessitated to divide them with a saw. Having done so, I discovered within the great foramen, at the junction of the two vertebræ, three distinct deposits of bony matter, somewhat similar to a small splent or spavin; and also within the theca about four ounces of serum, but no morbid appearance of the marrow itself.

" The most general cause is pressure on the brain; and I am disposed to think, that if experiments similar to the one I am about to relate be followed up, in the course of a short time hypothetical reasonings may give way to true ones.

" Some time ago the head of a horse affected with kumree was divided from the neck, with the view of examining the seat of glanders: in the act of raising it from the ground, to place it on a table, the muzzle was taken hold of, so that the part adjoining the neck pointed downwards. While in this position, a young gentleman present observed about three or four ounces of a limpid fluid run from the cavity of the cranium. The cranium was instantly opened, but no morbid appearance of the brain could be detected: the fluid observed was supposed to be an accumulation of the water which is always found in the ventricles to the amount of about thirty or forty drops.

Immediately afterwards another kumree horse was destroyed, and about an ounce of a similar fluid was found floating in the cavity of the cranium, but no morbid appearance of any part of its contents.

" A few days subsequently the following experiment was tried, for which was selected a fine arab horse, eight years old, in good condition, and apparently free from every complaint but weakness of the loins, which he had in the most malignant degree I ever witnessed: so much so, indeed, that it was with great difficulty he moved forwards, and was totally unable to ascend a small acclivity that was adjacent.

" The horse was cast, and a line was drawn horizontally from the inner angle of one eye to that of the other* ; then a vertical line from the centre of the horizontal one towards the muzzle (*vide* Diagram). About half an inch, or perhaps more, from the centre of the vertical line, and about the same distance from the horizontal one, the centre pin of a trephine was placed, having first removed the integuments by two sections made thus V, with the apex pointing inferiorly. The trephine was now worked till the bone

* If Mr. Molyneux were to draw his horizontal line from one foramen supra-orbitarium to the other, he would better accomplish his object. The opening which he recommends would be at the very inferior part, or even below the frontal sinus; nor could he thence easily or at all get at " the most depending part of the bones of the cranium." Ed.

was sawn through; then from the frontal sinus, with the centre pin alone, a small hole was bored through the most depending part of the bones of the cranium. This hole permitted the escape of at least two ounces of serum, the evacuation of which relieved the poor animal so much, that he immediately afterwards ascended that acclivity which half an hour previous he could not do. With the view of permitting the exit of any fluid that might have remained, he was, while on this hillock, turned round, and led a little forwards, so that the posterior extremities were about three feet higher than the anterior ones; and his head was also depressed as much as possible. In this position he was kept for about fifteen minutes, during ten or twelve of which the water poured out with great rapidity. From this it would appear that the fluid insinuates itself into the theca of the spinal marrow, though perhaps in small quantities, and not farther than the last cervical vertebra.

For about a quarter of an hour afterwards he was walked, trotted, and occasionally turned round; and though in this exertion he exhibited some difficulty, no person who was not aware of what had been done would suppose him to be the same horse. He was also more than once walked up and down the hillock before alluded to, and, on one occasion, he was led down a tank. He took a drink of water, and returned with little difficulty; but I must here observe that this tank was not so steep as those generally found about Calcutta.

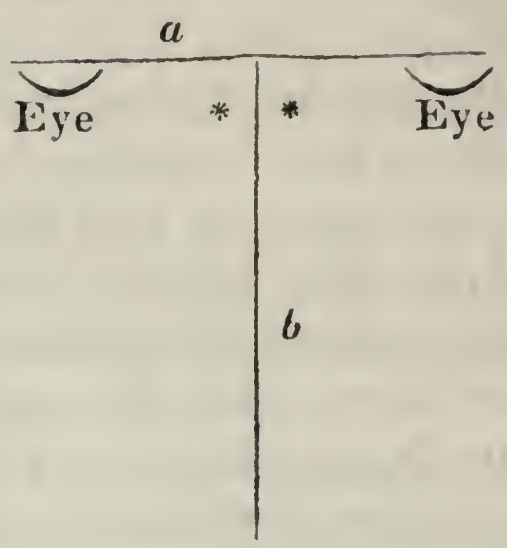
" Ordinary measures were now adopted to prevent symptomatic fever; but I am sorry to say that he expired on the 10th day. All this time he was kept as quiet as possible; and I am ignorant how he may have been from day to day with regard to kumree. An attack of fever, under which I laboured, deprived me of the opportunity of examining the parts after death: however, I was informed that no morbid appearances were present about the spinal marrow nor brain, except what would have been expected from the general inflammation.

" Here two questions naturally arise, which are worthy the serious consideration of the anatomist and physiologist.

" 1st. Does pressure on the brain produce weakness of the loins in horses?

" 2d. If so, why should not the anterior as well as the posterior extremities be affected?"

Diagram.



a the horizontal line from eye to eye.
b the vertical line.
The two round spots denote where the trephine is to be placed.
The operation can be performed at either side of the vertical line: the most correct way to do it is to place the trephine so that the circle of the trephine will come to within a quarter of an inch of both lines.

DROPSY AND THICKENING OF THE PERICARDIUM IN A COW, CAUSED BY A NEEDLE STICKING IN IT.

By Mr. W. A. Cartwright, *of Whitchurch.*

ON Monday, 24th of March, 1828, I saw a cow of Mr. Tudman's, of Black Park, at nearly her time of calving. The owner had taken about two quarts of blood from her, and given her a pound of salts, as he thought her staked.

Symptoms.—Lies down; grunts, but scarcely more than cows generally do that are so near calving. Horns and body warm; pulse quick, and feeble; dullness and unwillingness to move.

The salts had not operated, and I deferred administering any medicine until towards night.

7 P. M.—Bowels not opened. Pulse quicker, respiration more laborious. Took about six quarts of blood from her, and gave her aloes bbds. ℥iij in gruel, and ordered her to have plenty of clysters and to be walked about a little.

25th.—No alteration. Bowels not opened. ℞ ol. lini. ℔ifs, tinct. opii. ℥fs, in some gruel.

27th.—Pulse can now scarcely be felt; eats nothing; bowels constipated; stales freely. Does not appear to be in acute pain. ℞ ol. lini. ℔j, sps. terebinth. ℥j. sem. croton. gr. x, in gruel.

29th.—Parturiton approaching. Pulse still obscure; warm all over. Œdematous under her jaws, and about her breast and udder: general appearance not much altered, and she eats occasionally a little hay.

30th.—Died about nine o'clock in the morning. The owner saw her standing up about five minutes before, and she did not then seem any worse than usual.

Dissection.—A butcher had skinned and opened her soon after she died; and I did not see her until about five in the afternoon. On cutting through the sternum, the pericardium was found to occupy the whole of the opening, and was attached to both sides of it for several inches down, and also to the diaphragm. It had pressed a part of the lungs out of its proper situation, and was at least three times its natural size. The parietes were altered in structure, and one-sixth of an inch in thickness, resembling the paunch more than the delicate membrane of the pericardium, and contained a gallon of discoloured fluid, interspersed with flakes of matter. The heart and pericardium were partly coated with this flocculent substance. A piece of a darning needle, about $2\frac{1}{8}$ inches in length, with the eye broken off, was discovered lying upon a part of the pericardium; and a small ulcer, three-quarters of an inch deep, appeared near the apex of the heart. The cowman afterwards found two sixpenny nails and a shot in her first stomach.

Observations.—The needle in the pericardium, and the corresponding ulcer in the heart, convince me that the presence of this foreign body was the cause of the disease. The principal symptoms indicating it were, a thready quick pulse, hardly to be felt; a day or two before her death, swelling under her jaws and throat, bad appetite, and dulness came on, *but no apparent pain.*

There is reason to believe that this disease, and proceeding from similar causes, may not be of unfrequent occurrence. A gentleman who was in the habit of using riddles in his barn for the dressing of his corn, lost a cow from a disease the nature of which he did not quite understand. He found the heart enlarged, and its covering thickened, and a piece of wire two inches in length sticking in it, which had produced extensive ulceration and gangrene. EDIT.

CHRONIC INFLAMMATION, AND ENTIRE DISORGANIZATION OF THE KIDNEYS.

[*By the same.*]

ON the 23d of February, 1825, I was requested to see a brown cart horse, belonging to the same gentleman, that had had the "gripes," as the farrier called it, about a fortnight before Christmas, and had not been well since.

Symptoms.—Walks rather wide with his hinder legs, and bows them out in a peculiar way; flinches when pressed over the loins. Pulse 30; appetite good. Has been repeatedly bled, and has had medicine. Purging and alterative balls were now given to keep the bowels regular. He was again bled several times; a mustard blister was applied to his loins, and a rowell inserted in his thigh. The blood always contained a great quantity of serum; and his pulse varied from 25 to 30. He gradually became weaker, though he fed tolerably well, and was lively, and did not appear to be in any pain. On the 1st of April following he suddenly died.

Examination.—On taking off the capsule, each kidney was found to be in a complete state of putrefaction, of a light blueish colour; the texture totally destroyed, so that the finger would pass through any part of them as through mud. The vessels of the kidneys did not appear diseased when I *drew* them out of the diseased masses. The other viscera were perfectly sound, except two or three places on the small intestines, about the size of one's hand, which were considerable inflamed. He voided urine in small quantities and high coloured.

I think it probable that the attack which they called "gripes" was an acute inflammation of the kidneys.

A LETTER

Addressed by "One of the Non-Eligible" to Sir ASTLEY COOPER, *on the Constitution of the Veterinary Examining Committee.*

SIR,

IN presuming thus publicly to address you on a subject about which you have perhaps already, in one way or another, been too much importuned, I have not the vanity to imagine that any thing I can urge will induce you to alter your present expressed opinions; nor, indeed, to suppose that I can offer any thing stronger than what

already, in forms, must have come under your notice. I merely feel desirous that such strange discrepancy of opinion as exists between the whole body of veterinarians and you and your committee on this subject, should stand plainly on record, and that what appears to us such unmerited exclusion should be made as public as possible; and perfectly convinced, that even the medical part of the community will show a majority in our favour as often as the question is fully and fairly stated.

My reasons for addressing you in particular, are—1st, Because you are stationed at the head of the Veterinary Examining Committee; and, 2dly, because, from what has recently transpired at the meetings held by the committee of governors of the college, it would appear that you have been mainly instrumental in shutting the door against the admission of veterinary surgeons into that committee.

As all the information we are able to get at, publicly, regarding the opinions and transactions of the governors of the college and the members of this committee, has been very recently laid before us in the pages of THE VETERINARIAN, in a brief, but very interesting account of the annual meeting for the present year, held May 28th, and again, by adjournment, on June 14th (vide Nos. 6 and 7), I shall commence my investigation into the mysterious causes of our unmerited exclusion with some extracts from these reports.

At the first of these general meetings, our report says, "it had been acknowledged by Mr. Coleman, that the committee would be more effective, and much advantage would result, if *a limited number of veterinary surgeons were added to the present examiners.* It was, therefore, resolved, that application should be made to the present examiners, to ascertain whether they were willing to admit veterinarians among them." On this memorable occasion we had the good fortune to have present Sir Astley Cooper, Drs. Cook and Pearson, and Messrs. Bell, Brodie, and Green. They gave it no direct reply; but recommended, *that a second and distinct committee should be formed, consisting entirely of veterinary surgeons, with the two professors, before whom the candidates should* FIRST *appear; and, if passed by them, should afterwards undergo the ordeal of the old committee.*

One would hardly have credited that such a proposition would have emanated from a set of men, who not merely stand in the highest rank in the medical profession, but who are really men of first-rate attainments, and most, if not all of them, of exemplary modesty and unassumingness. On the present occasion, however, if they have not forfeited their acknowledged claims to the former, they have most unequivocally shown the absence of all sense of the latter.

They have gone much further, *they have branded the whole veterinary profession with incompetency to sit* WITH THEM *on the veterinary examining committee.* In my mind, there appears to be only one reasonable mode of accounting for the origin of so galling a denunciation, and that is founded upon the superficialness of their knowledge on subjects about which they presume, and would have us believe, they know so much: indeed, so strange and otherwise unaccountable does this very act of their excluding us from the committee appear to me, that, if I lacked other proofs, I should feel no hesitation in urging it as presumptive evidence of their utter incompetence for the situation in which, for the want of better men, they were placed. There is one set of men who are equally ambitious of rivalling us with themselves, and whose presumption has the same shallow basis—I mean the *grooms;* but then these self-constituted worthies would consider themselves demeaned indeed were their horse-knowledge set in comparison with that of a surgeon or physician; they would as soon think of seeing a reverend divine prescribing for a horse as a doctor! And, really, were I so situated as to be compelled to deliver over my patient either to the groom or to the physician, I should be greatly disposed to make choice of the former; and for this simple reason, because there would be a chance of the one doing good, though there would also be the risk of his doing harm; but with the latter, there would be no chance of his doing either good or harm—all that he would effect would most assuredly amount to *nothing*.

What, then, became of this insulting proposition? Were we yet further to be insulted by having it proclaimed to us? No! it met, in embryo, with its deserved fate—rejection—even in a quarter whence one had but little to expect, even among the governors; who here really did us a piece of undoubted justice, and in which we will do them the favour not to inquire into their motives for such a charitable act.

Supposing, however, that so *great an honour* had been conferred upon us, as graciously to permit us to form ourselves into a conclave, whose duty should be that of the governess of a preparatory school, only differing from it in one trifling particular, which is, that, while the governess prepares her pupils for more intelligent and competent masters, we transfer ours to finish their examination before *masters* who, in every body's estimation but their own, know even less about the matter than the very pupils they pretend to examine! I mean, good sir—don't be alarmed— as *pure veterinarians*. I say, supposing such a side-door had been thrown open to us, pray, Sir Astley, how many do you imagine would have entered? or, if any did, of what description do you conceive they would have been? For my own part, much as I respect every

one of the present medical committee, and highly as I esteem you and several others whose acquaintance I am honoured with, I would rather sweep the cross-way in Regent Street, or scour the brass knocker on your door, than so mentally degrade myself and belie my understanding, as to be guilty of an act that would give the public reason to believe that you, who had been all your lifetime in attendance on man, could possibly know more of my own profession than myself, who had been all my lifetime in attendance on the horse.

This leads me to put a question, which, like many others, is very easily put, but not very easily answered; and that is, pray, Sir Astley, what do you conceive the quantum and nature of the veterinary knowledge possessed (not by yourself exclusively) but by any or every one of the present medical committee? Do you suppose that either Drs. Babington or Pearson, Messrs. Brodie or Bell, could stand the test of examination himself, merely in the osteology of the horse? I really doubt whether any one of them could give me a proper account of the bones of the skeleton! And as for the peculiar mechanism and physiology of many of the joints, why, it is information they could obtain only imperfectly either from dissection or reading, and therefore what no one believes they can possess. In general physiology they would find themselves "more at home;" but then, what does physiology lead to? What ought the examiner to have constantly in his view while conducting his inquiries in this department? Why, pathology. And what is the sum of your medical examiner's knowledge in this, the focus of all medical acquirements? What does it amount to? To—to—to worse than nothing; to misconception and error. If not to want of theory, to want of practice; and, worse than both, to want of that faithful teacher and unerring guide, experience. Such are the qualifications of the individuals who reject us as unfit, and erect themselves into the situations of examiners, and unhesitatingly decide on the acquirements of those who are to be launched forth into the world with diplomas in their pockets, certifying that they are "*qualified to practise the veterinary art in all its branches!*"

Having gone thus far, it seems but fair to give place to the opposite party; or rather to state the reasons advanced by those in place, why they should exclusively continue there. First, then, it is said, that, being such eminent medical characters, even their names are of great importance to us, and necessarily and greatly enhance the value of our diploma. If what I have already advanced be correct, that most persons would trust their sick horses to their grooms, or even themselves prescribe for them, rather than send for the family surgeon (indeed, that is quite ridiculous; a

horseman would never dream of sending for him), then this argument has quite the contrary tendency. A surgeon or physician's name, if it testifies anything, shows that the individual possesses medical knowledge, and yet may be a perfect novice or ignoramus when he comes to practise on the brute creation; in fact, it goes to show that he has attended certain lectures, valuable in themselves, but not teaching an art which the same diploma certifies he is qualified to practise. It is precisely the same thing as a farrier receiving an attestation from a watch-maker or a locksmith; the two latter conceiving that, because they were well versed in mechanics, and practised them skilfully in their own handicrafts, they could instruct any one in making horse-shoes; or, at least, on account of any celebrity they might possess in their own trades, that the public would give them credit for such an extension of theory to practice! Quite the reverse, however, we know to be the case: arts, even the most simple, in practice, in appearance, and the most closely allied, are yet constituted into different trades; we have the whitesmith and the blacksmith; one man to make a horse-shoe, and another to make a horse-nail; one man to hold a gun-barrel, a second to bore it, a third to make the loops for it, and a fourth to polish it; in fine, all these several artisans practise within their respective spheres without presuming to interfere one with another; and yet we outcast veterinary surgeons are told, that all the study and practice we can have will never qualify us to occupy those seats which, to our professional welfare, are so ably filled by the present examiners. This is, in truth, *argumentum ad absurdum.*

In order, however, to combine the advantages of such names of renown, and, at the same time, add a little wholesome practical information to the stock of knowledge possessed by the committee, it was proposed to let in two, or three, or four competent veterinarians to act with the medical members; but the latter, clinging fast to their places and their monopoly, and disrelishing the idea of having to take wine, or starch their manners or conversation in the company of persons over whom they have so long usurped an unmerited, and now evidently injurious authority, replied,—that as the profession was in an *eminently flourishing state*, they did not see the necessity of any alteration in the constitution of the committee.

If our medical rulers would stand upon this ground, they must, first, prove to us that the profession really is in a flourishing condition; and, secondly, that their committee has promoted such a state. Would any one believe it possible for these very men to declare us to be in "a flourishing state," who, with the same breath, denounce us as unfit to sit at our own board of examina-

tion? These two recorded reports of the committee require no comment: they too plainly inform us that we have not yet touched the secret spring of such unmeritorious proceedings.

Such, however, was the ground, rotten as they themselves by their acts of excommunication had made it, upon which they chose to stand until they were requested to give an official opinion on the subject to the governors at their adjourned meeting in June last; on which occasion the following communication from the examiners was received and recorded:—"That a law of the Veterinary College limits the examining committee to those who deliver, or have delivered lectures on subjects connected with the veterinary art; *and the committee do not consider that any alteration of this law is at present necessary.*" This was, truly, a lucky find for them. I wonder who had the good fortune to discover that such a wise law existed; one that any ignoramus, or any blackguard, might conform with, and yet remain as unfit as ever to become an examiner. However, it is not for us to find fault with such a law as this; it leaves the entrance-door as wide open as the most incompetent of us could possibly desire.

You shall hear from me again, in continuation.

ONE OF THE NON-ELIGIBLE.

A CASE OF RABIES IN THE DOG.

By W. YOUATT.

BEFORE I proceed to the preventive or curative treatment of Rabies, it may not be uninteresting or useless to narrate a few cases. The reader will be enabled to form a better estimate of the value of the opinions that have been stated, and will be better prepared to determine what can or ought to be done.

A white terrier, of which no previous account could be obtained, except that it was quite well two days before, was brought to me at 3 P. M. Nov. 26, 1827. The lower jaw was partially paralysed; the tongue hanging out, and of a dark colour; evident strabismus, the cornea of the left eye becoming opaque and *green;* a slight staggering in the gait, and the eye occasionally fixed on or following some imaginary object. In two hours a grating choaking sound began to accompany each inspiration, and the dog worked with his paws at the sides of his mouth, as if to get rid of something that excessively annoyed him. His efforts to accomplish this were exceedingly violent, and he rolled over and over in the attempt. He began to be very uneasy, and was

shifting his posture and scraping his bed together almost every instant. No howling, nor the least disposition to bite.

Mr. Mayo had expressed a wish to experiment on a rabid dog. He favoured me with a call about 9 o'clock. Seven ounces of blood were detracted from the jugular; and an attempt was made to inject an equal quantity of warm water. The experiment did not perfectly succeed. Five or six ounces more of blood were lost, and eight or ten ounces of water injected. During the process of injection the animal heaved convulsively, and vomited twice.

Nothing more was done for a quarter of an hour. The laborious breathing and choaking inspiration evidently increasing, the anterior portion of the second ring of the trachea was excised. This afforded not the slightest relief, but, on the contrary, the hoarse, grating, choaking inspiration was decidedly aggravated.

The poor fellow was again liberated. He was very weak, continually shifted his posture, but was afraid to lie down. At 12 o'clock I saw him again. He was sitting leaning against the wall, and scarcely looked up, but the heaving at the flanks and the hoarse grating sound were the same.

Nov. 27th, 6 A. M. He was found dead: he had slipped a little from his leaning posture, and must have died without a struggle.

At 12 the post-mortem examination took place. Slight vascularity of the pia mater—none of the cerebrum or cerebellum. No fluid in the ventricles, or vascularity of the plexus choroides. The medulla oblongata, on being cut into, shewed slight pinkiness of substance. Some fluid between the dura mater and the spinal cord, and considerable injection of the sheath of the spinal marrow through its whole extent. The tongue was discoloured at its extremity—no vesicle or swelling of the frœnum. No inflammation of the pharynx, the larynx, the trachea, the bronchial passages, or the substance of the lungs. The bronchiæ, however, were filled with bloody spume; and there was slight injection of the epiglottis, with turgescence of the small vessels in the angle behind. The muscular substance of the heart was dark-coloured, but no ecchymosis. No inflammation of the œsophagus. Much bile had been thrown into the stomach, and had stained the whole of that viscus. Most of the rugæ were inflamed, but not violently: no ecchymosis. Not the smallest portion of indigesta in the stomach. Much bile in the duodenum, and slight peritoneal inflammation through the whole of the intestines.

This was a singular case, in some respects deceptive, yet clearly marked. The disease was evidently cut short by the two important experiments, the result of which will furnish matter for observation hereafter.

CASES OF RABIES IN THE COW AND THE DOMESTIC FOWL.

By J. Ashburner, M.D.

ON the 12th March, 1807, Dr. Beddoes and Dr. Stock accompanied Mr. King to the village of Weston, near Bath, for the purpose of seeing a rabid cow, that was shut up in a barn at Farmer Wintle's. They observed the animal from an open window above its reach, and opposite to them was a strong barricade, about seven feet high, which divided that part from the rest of the barn. The space of the floor thus partitioned, in which the cow was placed, was about 20 feet by 14. She was excessively furious, and bellowed very loud; frequently attempted to leap over the bar, and several times nearly succeeded. Sometimes she ran with violence against the wall, and fell down in convulsions. A wooden block was let down from the window, at which she ran with great fury, and tossed it about. A bucket of water was similarly let down, but before it came to the ground she plunged at it and overturned it. Upon the water being splashed about, she fell into violent convulsions. Her eyes were much blood-shot.

Mr. King observed her for about two hours, and at one time she was seen attempting to eat a little hay; but it was soon vomited again, and she then voided a small quantity of black hard dung, to which she turned round, and in a short time ate it up.

Farmer Wintle informed Mr. King, that about two months before several rabid dogs had passed through the field in which his cow was placed, but they had not been observed to bite her. She had calved about a month before this time. It was on the 8th of March that she had been perceived to be different from her usual way. In the evening she was very unruly, and frightened the woman who went to milk her. On the following morning she quietly submitted to be milked: in the evening of that day she foamed at the mouth, ran about in a very wild manner, and rushed at people with her mouth open, as if to bite. She was then confined in the barn.

This cow died on the night of the 12th March, and on the 14th was brought to Mr. King's House, in Dowry Square, where he dissected it on the 15th. The brain and spinal marrow were very soft: they were not at all inflamed: the tongue, as far as the root, was natural. The whole surface of the fauces, pharynx, larynx, and mucous membrane of the trachea, was of a dark colour, and in appearance resembled brownish crimson velvet. The pleura costalis, to within two ribs of the diaphragm, was of the

same tint: in parts it was putrid. The pericardium was full of a dark-coloured fluid. The cavities of the heart were distended with dark grumous blood. The diaphragm and stomach were healthy. The liver was small, pale, and shrivelled. No bile was perceivable in the small intestines. The spleen was very dark, flabby, and full of grumous blood. The kidneys were in a putrid state. The rest of the abdominal viscera appeared healthy.

Mr. King was desirous of trying an experiment with the saliva of this cow, and, accordingly, in one of the attempts she made to leap over the barricade, her head projecting over it, he succeeded in obtaining on his hands an immense volume of foam which was discharged from her mouth. He had made two incisions under the wings of a common barn-door hen, quite through the integument, the lancet scratching the muscular part. The foam immediately taken from the cow's mouth was inserted, by rubbing it, into these cuts. The fowl was confined in a basket, her head projecting through an aperture; she was secured in such a manner as to prevent her from pecking at the incisions; and thus the bird was sent to Dowry Square, in Dr. Beddoes' carriage. The next day this fowl was let loose, among others, in a poultry-yard at Mr. King's residence. On examining it from time to time, the incisions were found to be soon healed, and their place could with difficulty be discovered. The habits of this fowl appeared to be exactly like those of the rest. On the 25th May, however, she was observed to run at the other fowls, and she refused her food. She had a wild, strange expression, and her eyes were blood-shot. Early in the following day, her legs became contracted, so that she very soon lost the power of standing upright. She remained sitting, with the legs rigid, a long time, refusing food and water, and appearing very irritable when touched. She died in the evening, immediately after readily drinking a large quantity of water, which had been offered to her.

Early on the morning of the 27th of May, this fowl was examined by Dr. Macartney. The inoculated parts appeared recently inflamed. There was great vascularity about the cicatrices, which exhibited three small tumours, each about the size and shape of a compressed pea, the vessels of which were turgid with blood. At the time of the inoculation, Mr. King observed no injected appearance about the parts, nor was such apparent when the bird had been examined at any subsequent period. The trachea and œsophagus were considerably inflamed, and the vessels of the brain were distended with blood.--*London Med. Gaz. June* 7, 1828.

TWO CASES OF STRICTURED AND STRANGULATED INTESTINE WITHIN THE ABDOMINAL CAVITY, WITH PATHOLOGICAL OBSERVATIONS THEREON.

By Wm. Percivall, *V. S.*, 1*st Life Guards.*

CASE I.

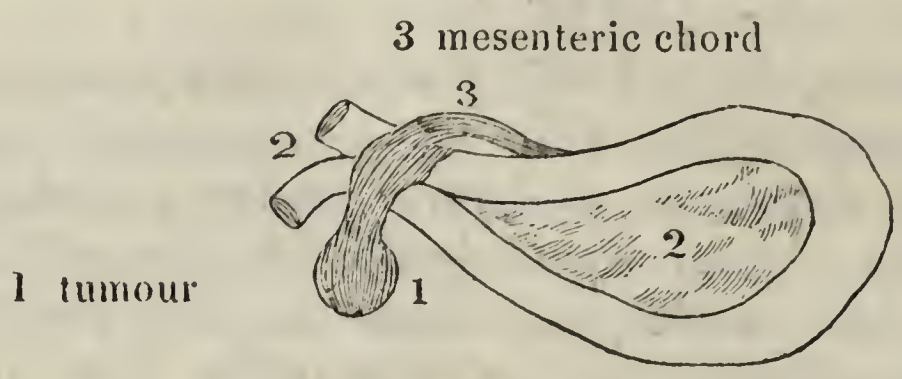
ON Monday morning, July, 1827, I was called to attend a little black horse, the property of Col. H——, upwards of twenty years of age, and supposed to labour under a sudden attack of "gripes." The animal was seized with the malady while at exercise, and had, since his return to the stable, manifested extreme abdominal pain, by continually lying down and rising, and at intervals rolling upon one side, in which posture, supported by his legs against the side of the stall, he appeared to obtain some temporary relief, his head, however, still often turning towards his flank. His pulse was 70, but not thready; his respiration was also accelerated, but not remarkably disturbed. He neither rolled, nor lay upon his back; nor did he toss about in any violent convulsions. He had been observed to stale, but no dung had passed from him that morning. I ordered that he should instantly lose a large quantity of blood; take pulv. opii 3j in bol.; and be raked, and have a copious injection. But little dung, however, was found in the rectum.

Towards the afternoon the symptoms abated, and he continued apparently relieved. At half past eight p.m. I saw him for the last time: his breathing and pulse had not suffered any abatement; notwithstanding, the animal betrayed no actual pain nor internal uneasiness, neither by action nor in countenance. Cont. enem.

At the hour of five on Tuesday morning, the groom, on entering the stable, found him suffering under a violent relapse, in which paroxysm of pain he died before I could be brought to his assistance.

Examination.—Considerable serous effusion (about 3 or 4 gals.) into the abdominal cavity. About a foot in length of the ilium forming a duplicature strangulated, by being included and tightly strictured within a fold of an elongated portion of mesentery, from which grew, by a neck, a fatty tumour, as large as the egg of a goose, and weighing six ounces. The portion of mesentery forming the neck or root of the tumour was, I found, simply twisted around the ilium; but the parts had become so aggluti

nated together by adhesive matter, that not only was there no chance of their righting themselves of their own accord, but so as to render their unravelling a perplexing affair after they were removed from the body. So effectual was the stricture, that even the flatus contained within the strangulated portion of gut could not be forced through it into the sound canal. The gut itself was nearly black, and had suffered much in its firmness of nature from inflammation and approaching gangrene: it contained some dark-coloured fluid blood, but scarcely any alimentary matter.



CASE II.

The following case of "strangulated rectum" was communicated by Chas. Percivall, V. S. 6th Dragroons, and occurred during his station in India:—

A horse belonging to Captain C——'s troop was reported by the farrier to have an attack of spasms, to which he observed he had formerly been very subject.

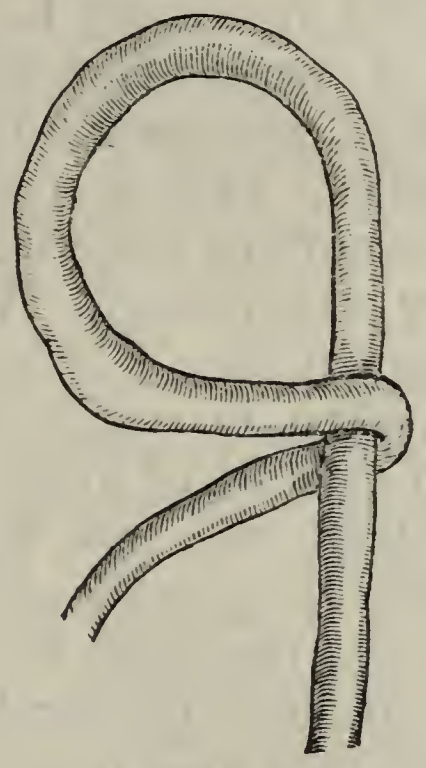
On visiting him, I found him labouring under enteritis. A small and quick pulse; respiration difficult; extremities cold; the surface of the body bedewed with cold sweats; and costive state of body—expressing great pain, by frequently lying down and getting up. Being in very high condition, I ordered him to lose eight quarts of blood, a stimulating embrocation to be applied to the surface of the abdomen; to have aloes ℥j in decoction; and injections to be thrown up every half hour: legs to be bandaged.

Upon seeing him about an hour afterwards, the farrier in attendance informed me, that in performing the operation preparatory to administering the enema, he felt on the near side a large tumour, or, as he expressed it, a hard lump. I desired him to repeat the operation of raking, and to make use of gentle pressure to the tumour, conceiving it might possibly be the bladder, which, from over-distension, was rendered incapable of contracting upon its contents, and that gentle pressure might be the means of enabling it to overcome its morbidly distended condition: this was accordingly done, but without affording the slightest relief.

I ordered the enemas to be continued; but he died within the space of two hours from the time he was taken ill.

Post mortem examination.—I found extensive inflammation throughout the whole of the intestinal canal, but principally of the colon and rectum, evidently arising from the latter being twisted and doubled back into the pelvis, forming a sort of pouch, resembling in colour a piece of scarlet silk, effectually obstructing the intestinal canal; and immediately above this strangulated portion there was a large quantity of hardened fæces.

The rectum was twisted in the manner here represented.



Another horse, belonging to the same troop, attacked with precisely the same symptoms, and in which the same treatment was adopted, died within three hours; and upon examination exhibited the same appearances as the preceding case.

Observations.—The above are the most recent cases of this description which have come within my knowledge; but it would require very little search or inquiry to make great additions to them; *inversion*, *involution*, *invagination*, *introsusception*, &c. being all accidents of the same class, tending to the same dreaded consequences, and therefore to be included in our account. They constitute, altogether, a branch of pathology of very serious importance indeed; for they are, but too often, hardly less dubious and obscure in their very presence than in their origin; and even could they be with certainty detected, would they cease to harass the mind in devising expedients by way of remedy? To add to these perplexities (as if it were the intention of our art rather to conceal than unravel mystery—to furnish a cloak for ignorance rather than provoke inquiry by candid acknowledgment), these grievous and hidden maladies have been huddled together, and confounded under that vulgar unmeaning term "gripes." Really and truly this is a *griping* evil, and one, I regret to add, that veterinarians of high authority have perpetuated, by giving assent in common colloquy to that which, on reflection, they must see the vital neces-

sity of rejecting from our nomenclature altogether. Mr. Bracy Clarke has written an essay on what he calls "gripes," without ever having made mention of what certainly appears to be the only true meaning attachable to the term, viz. involuntary, painful, muscular contractions—*spasms;* and many of our practitioners are too apt to run away with the symptom, and give a name to it, instead of looking at the disease. If a horse only lies down, and rolls and rises alternately from pain, no matter what previous concomitant or subsequent symptoms he may have,—no matter what may be the history or presumable origin of such symptoms,—he is said to have the *gripes*, and venesection and oil of turpentine are said to be the remedies: such was the knowledge possessed by the farrier before veterinarians came into the practice, and to it we have added very, very little indeed. And I repeat, that in my opinion, our progress has not been a little retarded by considering all such cases as *gripes*, when, in reality, they no more partake of the nature of gripes than they do of hydrocephalus.

In such cases as the above, it is true, that even were we certain in our diagnosis, we should feel greatly perplexed to divine a mode of relief: this, however, is by no means a reply to what I have been contending for—a more intimate practical acquaintance with diseases which, however near they may resemble one another in their symptoms, are totally different in nature, in causes, and in effects. Although we may not have it in our power to do any *good*, we may, by our ignorance of the existing disease, do a monstrous deal of *harm*. Nature, if we do not interfere, will on occasions work wonders; but in our determination to act, right or wrong, we may possibly counteract all spontaneous efforts, and not only do that, but aggravate sufferings and accelerate death. In fine, it is our duty, at all times and in all cases, to make ourselves acquainted with the disease itself, and not simply with the symptoms, before we decide upon the plan of treatment; and if we cannot do this in a satisfactory manner, the event must hang upon threads no less hazardous to our patient than galling to ourselves.

These observations, arising out of the foregoing cases, although they throw no lights on the diagnosis of the diseases borne in view while penning them, may, it is to be hoped, draw attention to a quarter where it is greatly wanted, and where it will, if at all successful, be sure to be rewarded.

To the Editor of The Veterinarian.

SIR,

SHOULD you think the annexed communication worthy a place in your valuable Journal, I shall feel obliged by its insertion.

C. NEWPORT, V. S.

Aug. 21, 1828. *Gray's Inn Lane.*

AFTER the clear and able manner in which my friend, Mr. Bracy Clark, has done me the honour to mention my practice in the cure of quittor, and its subsequent approval and adoption by Mr. Sewell, of the Royal Veterinary College, I had hoped that the improper use of violent caustics would have been superseded. I am sorry, however, to state, that many cases have lately come under my inspection, in which the owners have been deprived of the use of the animals for a very unnecessary length of time, and the sufferings of the poor patient have been most cruelly aggravated.

Having had many conversations with different farriers on the subject, they have, one and all, stated, that unless they can bring out a *core*, the parts cannot heal. I need not say that the core is formed by their misapplication of caustics, such as the chloride of mercury, &c. to such an extent as to destroy the surface of the cartilages, and leave a permanent blemish, while osseous matter is thrown out, and sad lameness produced.

The mode of treatment the most simple, and which I find to be most effectual, is as follows:—

After the shoe has been removed, thin the sole until it will yield to the pressure of the thumb; then cut the under part of the wall in an oblique direction from the heel to the anterior part, immediately under the seat of complaint, and only as far as it extends, and rasp the side of the wall thin enough to give way to the pressure of the over-distended parts; and put on a bar-shoe, rather elevated from the frog. Ascertain with a probe the direction of the sinuss, and introduce into them a saturated solution of sulphate of zinc, with a common syringe that will hold from ℥ifs to ℥ij of the liquid. Place over this a dressing of the common cataplasm, or ung. terebinth., and renew the application every twenty-four hours.

I have frequently found that three or four such applications will complete a cure. I should recommend, that when the probe is introduced to ascertain the progress of the cure, it be gently and carefully used, as it may break down the new forming lymph.

I have found the solution very valuable where the synovial fluid has escaped; but not to be used if the inflammation of the parts be great.

THE VETERINARIAN, SEP. 1, 1828.

"Licet omnibus, licet etiam mihi, dignitatem *artis veterinariæ* tueri."—*Cicero.*

VETERINARY MEDICAL SOCIETY.

WE have great pleasure in reporting the progress of this valuable society. Another long list of honorary members has been added, containing names of which the medical profession is justly proud; and, some of them, in a manner most flattering to the society, soliciting to be enrolled, without the slightest previous application.

These gentlemen tell us that "they witness the present efforts "of the practitioners of veterinary medicine to place their profes- "sion on the respectable footing it ought doubtlessly to occupy, with "unfeigned pleasure;" and that they "regard every subject con- "nected with the healing art as part of the whole system of our "allied knowledge, and capable of reciprocal elucidations."

One gentleman thus writes: "I rejoice to see you conspiring "together to effect no party purpose, to gratify no private pique, "but to accomplish an object benevolent and useful, and in which "you cannot fail of success. Benevolent, in diminishing pain by "the more scientific treatment of the diseases of animals—useful, "not only in preserving the lives of many valuable animals, and "thus increasing the wealth of the state, but by your necessary "researches into comparative anatomy shedding additional light on "the structure and diseases of man—and certain of accomplish- "ment, because your honest zeal will be backed by the good wishes "and strenuous exertions of every friend of science, and by the "overwhelming force of public opinion."

One letter (from Dr. Haslam) is so honourable to the writer, and to the institution of which he will be an ornament, and it so admirably pourtrays the legitimate object of the veterinarian's pursuit, and the best result of his study and practice, that we are most happy in being permitted to give it nearly at length.

"Life and intellect, wherever they exist, in man or in animals, "are equally the subjects of beneficial enquiry; and no more

"honourable employment can be pursued by a human being than "the successful devotion of his mind to the development of the "structure and functions of the animal creation: and when it is "recollected that, like infants, they want the capacity of com- "municating the seat or degree of their sufferings, they *must* "require much skill and experience for their alleviation.

"On these grounds the philosopher may direct his views to "the remedy of their diseases, and to an estimate of their in- "telligence, with the hope of augmenting their docilities, and "encreasing their enjoyments, and effecting the physical improve- "ment of the race.

"The foundation of your society I consider a proud and "triumphant day, both for the interests of science and for the "advancement of humanity. It will lead to a due reflection on "the services that animals perform; and when man is taught to "view them as constituting the main part of the aggregate of "vitality and feeling, his knowledge will promote their health, "and his benevolence will protect them from cruelty and oppres- "sion. And this protection, being the result of that science "which enlarges the understanding and teaches the heart to com- "miserate, will more effectually restrain the intemperate sallies "of human passions, and the infliction of wanton injury, than all "the eloquence of the pulpit on the penal severities of legislative "enactment."

In the list of new honorary members we find the names of Sir Anthony Carlisle, Sir Astley Cooper, Sir Alexander Crichton, Sir Henry Halford, and Sir William Prout; Drs. Ager, Babington, Bree, Bright, Clarke, Granville, Heberden, Holland, Macleod, Macmichael, Maton, Scudamore, Sigmond, Southey, and Yeats; and Messrs. Abernethy, Alcock, Andrews, Brande, Callaway, S. Cooper, Coulson, Farraday, Keate, Key, Mayo, T. Millington, Pettigrew, Thomas, and Wadd.

Honoured by alliance with men like these, and still more honoured by the kind and flattering sentiments they have expressed, we feel, and we are persuaded every member of the Veterinary Medical Society will feel, the corresponding obligation under which we are laid. They speak and think of us as acknowledged members of the medical profession—as fellow labourers with them

in the cause of science and humanity—as what we *ought* to have been, and, what we *will* be.

The members of the Veterinary Medical Society have, in truth, taken upon themselves a great responsibility. We trust that they will not forget their duty or shrink from it. They must prove that they deserve the splendid patronage they have obtained. Let them shun discord as the bane of every good undertaking. Let them sacrifice their little private jealousies and dislikes. Let them not be too eager harshly to accuse or vindictively pursue those by whom their profession may have been inexcuseably neglected, or its interests compromised. There is no occasion for this. If their meetings be honestly devoted to the pursuit of truth, the objects of their earnest wishes and strenuous labours, the advancement of their art, and the vindication of the respectability of their profession, will and must be speedily and fully accomplished. Prejudice, supineness, and corruption can no longer arrest the progress of improvement.

Considering the avowed principles of the Veterinary Medical Society, the number and character of its members, and the most unexpected and gratifying support it has experienced, we apply to it prophetically, and with confidence, the language of the Roman orator "Quicquid est laudibile, idem est beatum et florens."

The winter session will commence on Wednesday Evening, October the 1st. The Chair will be taken at seven o'clock precisely. The following subjects are already proposed, and will be discussed in the order in which they stand :—

The Inflammatory Fever of Cattle....Mr. Youatt
Fistula of the Parotid Duct.....Mr. W. Percivall
The different Modes of Castration ....Mr. W. Goodwin
Inflammation of the Foot .....Mr. J. Percivall
The Navicular Disease .....Mr. J. Turner
Quittor .....Mr. Newport.
Pneumonia.... .....Mr. Langworthy.

Review.

Quid sit pulchrum, quid turpe, quid utile, quid non.—*Hor.*

An ESSAY on the Use of the CHLORURETS of OXIDE of SODIUM and of LIME as powerful disinfecting Agents, and of the CHLORURET of OXIDE of SODIUM in HOSPITAL GANGRENE, PHAGEDENIC, SYPHILITIC, and ill-conditioned ULCERS, &c.

By Thomas Alcock. Price 7s. Burgess and Hill.

WHILE Scheele was experimenting, in 1774, on the nature of Manganese, he discovered a peculiar gas, to which he gave the name of dephlogisticated marine acid. It was afterwards called oygenated muriatic acid, until *our friend* Dr. Pearson denominated it oxymuriatic acid, supposing it to be a compound of oxygen and muriatic acid. Soon, however, it was discovered to be no acid at all; and, at length, some French chemists began to suspect, but did not dare, in defiance of the universally received opinion, to assert, that it was a simple body. At the same period, and ignorant of their investigations, Sir Humphrey Davy was employed in similar researches; and he proved that it could not be decomposed by the most powerful agents; and added it to the list of elementary substances under the name of *chlorine*, on account of its yellowish green colour.

We will not speak of the total overthrow of what were supposed to be the fundamental doctrines of chemistry, respecting combustion, and the distinction between supporters of combustion and combustibles; but the discovery of the elementary nature of chlorine has been converted to the most important purposes of manufacture, and still more to the preservation of health, and the treatment of disease. The effect of chlorine in the discharge of vegetable colours has effected a revolution in the art of bleaching, and more lately, the combination of chlorine with different bases, and particularly lime and soda, have been proved to be most powerful disinfecting agents, and admirable remedies in various maladies.

M. Labarraque first added them to the materia medica; and Mr. Alcock has favoured us with a most valuable collection of facts scattered through various writings, English and foreign. His "Essay on the Use of the Chlorurets of Oxide of Sodium and

Lime," is in the hands of every human medical practitioner, and we now introduce it, with pleasure and gratitude, to the notice of the veterinarian.

We could have wished that he had not retained the word *chloruret*. It is, certainly, a literal translation of the French *chlorure;* but all English chemists have consented to term the combinations of chlorine with bases, *chlorides*. Mr. Alcock says, that these may be confounded with chlorates, the union of *chloric acid* with *salifiable* bases; but the slightest attention to orthography or sound, or the most superficial knowledge of the principles of chemistry, would prevent this. Beside, tyros will be too apt to confound these chlorurets with the carburets and sulphurets, substances very differently constituted. We adopt the term *oxide* to express the union of oxygen with a base, and chloride will best express the union of chlorine with a base.

Mr. Alcock first speaks of the chlorides as *disinfectants*. The practitioner will best procure them from the manufacturer, and very cheaply, in the form of a concentrated solution. If this be diluted with ten times the quantity of water, and sprinkled two or three times every day on any dead subject, not only will the process of putrefaction be retarded in an extraordinary degree, but will be immediately arrested if it had previously commenced, and all unpleasant odour perfectly destroyed.

A body was disinterred after the period of a month. The stench was insufferably noisome. A solution of chloride of lime was sprinkled over it: the smell was instantaneously destroyed—the surgeon was enabled carefully to examine the corpse—arsenic was detected in the intestines, and the murderer received the reward of his crimes.

Mr. Alcock naturally applies this to the prevention of putrefaction in anatomical pursuits; and he states that, by means of the disinfecting power of the chlorides, a subject may be preserved for several weeks, even in summer.

After macerating for anatomical preparations, the removal of the soft parts from the bones is a disgusting and even dangerous business. If a sufficient quantity of the solution of the chlorides be poured into the vessel containing the preparation, all unpleasant smell will be destroyed, and the bones, afterwards exposed to the action of the air, will assume a most beautiful whiteness.

After examining the bodies of persons or animals who had been poisoned, or destroyed by diseases which ran fast to putridity, the disgusting odour has for many hours adhered to the hands, in spite of every effort to get rid of it: but if the hands are washed with the diluted solution, and then with pure water, the purpose is instantly effected. Our clothes often embibe the

smell, and it adheres to them for a long time. If they are hung in a closet in which there is an open vessel containing a solution of one of the chlorides, the stench will soon be overcome.

He then speaks of the disinfecting properties of the chlorides in *the wards of hospitals* and *sick rooms*. The old method of fumigation with sulphuric acid and nitre, although powerful, was unpleasant to the invalid, and it could not be attempted in some diseases of the chest. The chlorides destroy contagion without suffocating the patient.

Mr. Alcock next treats of what much concerns us—the use of the chlorides in disinfecting and purifying stables. We believe that the power of contagion is somewhat under-rated by medical writers and by horsemen. It is true that a horse may stand in the next stall to a glandered or farcied one for many weeks or months without becoming infected, if the division be sufficiently high to prevent actual contact, and if the virus be not received on a mucous or abraded surface; but many can testify the danger of putting a sound horse where a farcied, or glandered, or mangy one had stood even many weeks before. Indeed, when the last disease gets into a stable, it is very difficult to get rid of the infection. Repeated scourings and white-washings have failed. The epidemic catarrh seems, at times, to assume a contagious form; and of this we are perfectly assured, that in heated and ill-ventilated stables, and especially where cleanliness is neglected, an animal poison is produced, contaminating the air, mingling with the food, and impregnating the very walls of the place, and becoming the fruitful source of the worst diseases.

In the malignant epidemic of cattle, we know how soon the stable or the cow-house becomes highly infectious. A species of leprous mange having once found its way into a kennel, is conquered by little less than the demolition of the building. Repeated scourings and white-washings will not disinfect the crib or kennel in which a dog has died with putrid distemper.

If one pint of the concentrated solution of either of the chlorides be mixed with three gallons of water, and the walls, and manger, and rack be brushed over with it, and this again be washed off with pure water, the stable will be completely disinfected. If a disease appears which we suspect to be contagious, and the stable be frequently and freely watered with this diluted solution, the danger to horses in the other stalls will be materially lessened or altogether removed. When mangy horses and dogs are dismissed as cured, a washing with the diluted chloride will remove any infection that might lurk about them, or which they might carry from the place in which they have been confined. All horse furniture, after undergoing a scouring of soap and water,

should have the process of disinfection completed with these solutions. As disinfectants, convenient, not unpleasant, and certain, these chlorides are exceedingly valuable to the veterinarian; and we are under much obligation to Mr. Alcock for directing our attention to them. Either of them may be used. The chloride of lime is preferable, as a simple and immediate disinfectant; the chloride of soda, where we wish to prevent the renewal of putrefaction.

Mr. Alcock next proceeds to the use of the chloride of soda as a remedy in the treatment of disease. He calls it the chloruret of oxide of sodium. We have already objected to the term chloruret, and we somewhat dislike, although it is chemically correct, this oxide of sodium. We speak of the sulphate and the carbonate, not of the oxide of sodium, but of plain soda; and why not the chloride of soda?

For the knowledge of this powerful disinfectant and valuable remedy we are indebted entirely to M. Labarraque, or, at least, for the proper preparation of it.

Of the remedial properties of the chloride of soda Mr. Alcock thus speaks:—

"The chloruret of oxide of sodium, in common with that of lime, has been shewn to possess the valuable property of destroying the most putrid effluvia arising from animal substances, even when these effluvia are diffused to a considerable extent in the surrounding atmosphere; it has also the property, when applied to the substances giving off these effluvia, of arresting or destroying the progress of putrefaction. Not only does it possess this power with regard to dead and detached animal substances, but in those distressing forms of disease in which a part or parts of the living human body become dead and putrid whilst yet attached to the contiguous tissues which preserve their vitality, it has the inestimable power of speedily ameliorating this most loathsome condition, by destroying the putrid odour emanating from the dead portions; and it, moreover, generally arrests the further progress of decomposition, and promotes the more speedy separation of the dead parts from the living than can be obtained by ordinary means. It very often is capable of changing the nature of malignant, corroding, and destructive sores, into the condition of simple ulcers: in many ulcers not malignant it is capable of greatly hastening the cure. In short, though not an infallible remedy, it is capable, under the guidance of medical and surgical skill, sound judgment, and experience, of alleviating, and often of totally removing some of the most distressing and loathsome diseases to which the human body is liable; disease which too often, uncontrolled by remedies previously in use, have hurried numerous victims to untimely graves." P. 67.

He then applies this to particular cases; and, speaking either from his own experience, or that of men whose evidence cannot be doubted, he gives a very interesting account of the effect of the chloride of soda on hospital gangrene; sinuous, phagedenic,

syphilitic, fœtid, and malignant ulcers; cancer, tetters, herpes, ulcerations of the mouth, diseases of the gums, caries of teeth, putrid sore throat, ptyalism, apthæ, ozena, ophthalmia, purulent and syphilitic; and gonorrhœa.

If the chloride of soda be thus useful in human surgery, it will not, probably, be quite inert in the quadruped. We believe, however, that it has been almost unknown and untried by English veterinarians. Our experience of it is very limited. We have used it with manifest advantage in a case of fistulous withers. Under its exhibition the ulcer assumed a healthy appearance in a far shorter time than it usually had done with our caustics and scalding. We destroy the fœtor of thrush with it, and generally arrest the progress of canker more speedily than we were enabled to do by any other means. In the putrid stage of *distemper* in the dog, we immediately remove the fœtor, and dispose the lips, and muzzle, and mouth to cleanse and heal, which we could only partially accomplish by the pyroligneous acid, and which we could not effect, in the slightest degree, by any thing else. In the insufferably stinking breath of petted dogs, arising from the accumulation of tartar on the teeth, and ulcerations of the lips and gums, we have applied the chloride with unfailing benefit. Beyond this our experience extends not; and we do not know a veterinary surgeon who has given it the slightest trial.

Mr. Alcock collects the experiments of French veterinarians. Messrs. Dupuy, Girard Jun., Vatel, Berger, and Bouley Jun. experienced good effects from it in the carbunculous tumours which followed the exhibition of setons in the epidemic of the spring of 1825; and M. Dard, in the spring of the same year, cured a glandered horse with it.

We are happy that we can direct Mr. Alcock to additional and most gratifying proof of the efficacy of the chloride of soda in the last-mentioned and most fatal disease.

M. Marc Etienne, veterinary surgeon to the 1st regiment of Cuirassiers, arrived at Moulins in May, 1827 (*Recueil de Méd. Vét., April*, 1828). The barracks were most unhealthily situated, and the regiments which had successively occupied them had sustained dreadful losses from farcy and glanders. The forage was likewise particularly bad, and disease began soon to appear. The slightest wound on the body or extremities was complicated with farcy-ulcers; and almost every injury of the head was followed by enlargement of the lymphatic glands, and defluxion from the nostril on the same side. The troops were exercised on a sandy plain, the dust of which irritated the membrane of the nose, and predisposed for inflammation; and in January and February 1828, thirty horses died decidedly glandered. Extensive ulcera-

tions were found on the mucous membrane of the nose and frontal sinuses, and in several cases the septum narium was perforated.

Another circumstance had aggravated the evil. At the side of one of the stables was a little court in which the lime for the new buildings and usual white-washings was slaked. The alkaline vapour penetrated into and filled this stable, and in the course of a few days 22 horses, which were previously in perfect health, began to refuse their food, to labour under ophthalmia, and to exhibit defluxion from the nose, and ulceration of the mouth. A cadaverous smell filled the stable, and large portions of separated gangrenous membrane were expelled from the nostrils.

Every attempt to arrest this destructive malady proved abortive, until M. Etienne had recourse to the chloride of soda, of the antiseptic power of which he had had some previous experience. He diluted the solution of the chloride with 24 times its weight of water, and bathed the ulcers with it. Frequently on the second application they began to assume the appearance of common wounds; and farcy tumours, which were fast developing themselves, were arrested in their progress. This diluted solution was likewise injected into the nostrils. The defluxion rapidly decreased; it soon disappeared; and in thirty or thirty-five days the animals regained their health, and returned to their work.

From May, 1827, to April, 1828, 195 horses had been attacked with these diseases; 30 had been destroyed before the use of the chloride was adopted; 30 died afterwards; 88 were perfectly cured; 30 were convalescent; and 17 were left under treatment, 10 of which were apparently doing well. When the injection could not reach the whole of the ulcerated surface, the disease, although mitigated, slowly pursued its course. On this account he feared that seven of those remaining under treatment would be ultimately lost.

In no case, however, was M. Etienne content with the simple local application of the chloride. The usual means of constitutionally treating the disease were continued; but these had been *perfectly ineffectual* before the chloride was used, and likewise failed when the chloride could not be brought into contact with every diseased surface.

Here, for the present, we pause. We earnestly recommend the work of Mr. Alcock to the diligent perusal of every veterinarian. He will derive from it many exceedingly important hints of practice.

That the chloride of *lime* will prove to *us* a valuable *disinfectant*, and should be always at hand, there can be no doubt. It is, however, simply a disinfectant. It has been applied externally, but without any apparent good effect, in mange and grease. It

has likewise been administered internally, but, in the doses in which it was given, it seemed to be inert.

When applied to anatomical preparations, it has been said to turn the edge of the knife in subsequent dissections. This we can believe where it was not sufficiently diluted, or the preparation had been immersed in or deluged with it. We have never experienced this inconvenience to any great degree, although we have sometimes complained that the colour of the muscles has suffered.

Whether the chloride of *soda* will maintain the high character, as a remedy, with which Messrs. Labarraque and Alcock are disposed to invest it, time will shew. We acknowledge that we are inclined to receive it as a most valuable addition to the veterinary materia medica. Our brethren will easily perceive in what diseases it may be employed with greatest probable advantage. We urge them to give it a fair trial in the first case of farcy, glanders, or fistulous or gangrenous ulcer.

Of its use as an internal remedy it would be presumptuous yet to speak.

The chlorides are best prepared by Messrs. Fetcham, of Manchester, and may be procured from any chemist.

Extracts from Journals, Foreign and Domestic.

EXTRACT from the ACCOUNT of the TRANSACTIONS of the ROYAL VETERINARY SCHOOL of LYONS, from September 3d, 1826, to August 5th, 1827.

871 animals were admitted into the infirmary, of which **571** were horses and cattle.

About a seventh part died; but one-fourth should be deducted from this number for animals who were afflicted with incurable diseases, as glanders and rabies, and who, having been given up by their owners, were destroyed for the instruction of the pupils.

The number of animals brought to the college for the inspection of the professor, and for whom he prescribed either verbally or in writing, or who were visited by the students *of the fourth year*, in the neighbourhood of the college, were **919**.

The whole number submitted to treatment amounted to **1790**.

Some atmospheric influence appears to have produced, during this year, in many animals, diseases resembling those which we

characterise by the name of *mucous fevers*. The parts most generally affected were the mucous membranes of the respiratory passages.

Of twenty-five horses attacked by this malady, and brought to the infirmary, one only died; and his death was attributed to a high degree of nervous irritation, caused by a blister designed to prevent pulmonary congestion.

Among the other horses the progress of the malady was slow, accompanied by slight ulceration of the mouth, and considerable discharge of saliva.

A restricted diet—small, but repeated bleedings—and antiphlogistics united with mucilaginous substances or with tonics, as the case required, speedily abated the inflammation.

A revulsion was then easily produced by frequent frictions on the skin, and the application of sinapisms and setons.

The heat of the summer caused many inflammations of the digestive and respiratory passages. With these mucous fevers were often united, and they were characterised by a discharge of viscid mucus from the mouth, redness of the schneiderian membrane, and injection of the conjunctiva.

Of eight horses affected with staggers, four were cured by *revulsive* bleedings from the veins of the extremities, the continual application of cold liquids to the head, setons in the chest and back, and opium when the bowels were not constipated.

The ligature of the carotid in a horse *immobile* whose head was forcibly drawn on one side, was attended with some benefit.

Acupuncturation was tried without success, as well as all other means, in four cases of palsy in the horse, and two in the dog.

Trombus (the tumour and ulceration produced by the effusion of blood into the cellular substance in venesection) has been often treated in the course of the year. The excision of the indurated part recommended by some veterinarians is bad practice. The old method of cure is far preferable. It consists in dilating the fistulous engorgements, then applying emollient and anodyne cataplasms for some time, and afterwards exciting suppuration and resolution by a deep cauterisation, when the cataplasms had produced sufficient effect. This mode of treatment has been invariably attended with success.

The section of the plantar nerves, recommended by the English veterinarians, and also fomentations of the feet, and a suitable *(convenable)* shoe, afforded no relief in a case of contraction so great that the horse was exceedingly lame, and walked on the toe only.

A bitch puppy discharged her fæces by the vulva. The anus was imperforate. It died a few days after the birth. A canal

of communication was found between the vagina and the rectum, and this intestine terminated in a *cul-de-sac*.

A violent and fatal disease appeared among cattle in the department of the Ain, during the month of November. M. Rainard, one of the professors of the college, travelled thither to enquire into the case.

He found the animals poor, but with good appetite, the skin dry, and with some fever. After taking the slightest food, there was swelling of the left side, and permanent hardness over the region of the paunch, with constipation. M. Rainard conceived it to be a chronic intestinal irritation, somewhat resembling that which medical men denominate the autumnal fever.

The excessive heat of the summer, and the bad quality of the food, in 1826, had acted as predisposing causes.

The occasional causes were, the feeding on too wet pasture, and the cold damp atmosphere which prevailed during the preceding spring.

The curative means which he employed were,—confinement to the stable, spare diet, frictions, plenty of barley-water, rendered laxative by sulphate of magnesia, and, afterwards, to correct the debility consequent on the disease, bitters were given in mucilaginous drinks.

Not a single animal was lost after the adoption of this mode of treatment.

Miscellanea.

We insert the following Horse Cause. There is something in the report passing strange, and the veterinary public will claim an explanation from the parties concerned: until opportunity is given for that explanation, we are silent.

NISBETT *v.* KENT.

THIS was an action brought by the plaintiff, a gentleman residing in Ireland, to recover compensation for the loss of a horse, in consequence of unskilful bleeding by the defendant, who is a farrier.

Mr. C. F. Williams, in stating the case to the jury, said that the horse had been a very valuable one before it sustained the injury which occasioned its death. The general practice was to employ a fleam upon such occasions; but the defendant, either to show his skill, or from some other motive, thought proper to use a lancet. The gentlemen of the jury must see that, where a man resorted to experiments contrary to the safe and sanctioned practice of others in the same line, he did so at his own responsibility. The consequence of bleeding by the lancet instead of by

the fleam was, that an excessive effusion of blood took place, which proved fatal to the animal. When the horse died, Mr. Nisbett sent for the defendant to inquire into the mode of treatment he had adopted; but the defendant refused to go, saying "The horse is now dead, and there's an end of it." He (Mr. Williams) considered this language highly unworthy of a professional man.

Another veterinary surgeon was then called in, who ascertained that the vein had been cut through, and the artery punctured.

Mr. Robert Mead Nisbett, the son of the plaintiff, proved that the operation of bleeding was performed on the horse by the defendant on the 21st of June in the present year. The horse was in very good condition at the time he was bled. The horse was bled with a lancet at the right side of the neck, and about a gallon of blood taken away. The bleeding was followed by a large swelling, which extended up both sides of the neck. The defendant did nothing with it till after he had pinned up the neck. He then ordered his man to chafe it with cold water. That was done for about a quarter of an hour, but the swelling did not subside. The defendant then desired witness to take home the horse quickly, and to chafe him with salt and water, and at the same time to tell his father not to be alarmed. He also said that the swelling would get larger, but that it would subside again. The defendant said that such a swelling occurred but in very few instances, and that witness might ride the horse if he chose. Witness did ride the horse a short distance, about half a mile. Was obliged to dismount, the horse was so unwilling to go on. In the mean time the swelling increased, and witness led the horse on, and afterwards went to procure the aid of a farrier, as the horse *was bleeding out of both nostrils*. The horse died in about two minutes. Witness afterwards went to the defendant to tell him that his father wished him to see the horse before it was removed. Defendant said he could not come, as *the horse being now dead, he could be of no further service.*

Cross-examined.—The swelling was equal on both sides of the neck.

By a Juror.—The horse was a well-bred horse, and had a very fine skin.

Mr. Davis, a farrier, said that he had been in practice in Bristol for upwards of twenty years, and had bled several hundreds of horses. In his opinion the horse in question had died from having been unskilfully bled. He found a great quantity of blood had escaped from the orifice. The vein was punctured through, and he thought the artery had been divided. He took from six to seven pints of arterial blood out of the horse's neck. The immediate cause of the death of the horse was suffocation, in conse-

quence of the blood which had escaped after the neck had been tied up. He thought a lancet was not a proper instrument to bleed a horse with.

By a Juror.—Never studied the veterinary art. Knows nothing of the college work, and is only a common farrier.

Mr. Justice Park.—Very well, Sir; you are a very modest man.

The plaintiff's groom proved that the horse was perfectly sound, and in good health. The value of the horse was about £60.

Mr. Lee, *a veterinary surgeon of extensive practice,* stated that, in his judgment, the proper instrument had not been used in bleeding the horse. For the sake of safety he always used a fleam in preference to a lancet. In the veterinary college Mr. Sewell always used the lancet whenever he bled, but never saw any other professor use it. The students always used the fleam. There was danger in using the lancet, *for the puncture in the vein was always larger than the puncture in the skin.* He believed that in the instance in question a branch of the main artery was wounded, and the vein cut through.

Mr. Sergeant Wilde addressed the jury for the defendant, and contended that the lancet might be used with perfect safety, and that there was no sufficient proof of the artery having been wounded.

Mr. Zachariah Huggins, the apprentice to the defendant, deposed to the horse having been brought to the defendant's stables, and stated that the uniform practice of the defendant was to bleed with the lancet. This horse was bled in the usual manner, *and that the death of the horse was occasioned by the plaintiff's not complying with the defendant's directions.* The orifice was closed in the usual way. Mr. Kent told young Mr. Nisbett that he must lead the horse home quietly, and not ride him. He saw the young man soon after with a whip in his hand, and spurs on. Before the horse left the yard his neck was swollen a little, which was not an unusual thing in cases of bleeding. There was nothing further that seemed to require the care of Mr. Kent at the time.

Mr. Williams, a veterinary surgeon at Bath, stated that he was in considerable practice, and always used the lancet. In his opinion there was no danger in the use of it. It was by no means unusual for swelling to follow bleeding, and was no proof of the operation being improperly performed. *It was also common for a horse, after having been bled, to bleed at the nose. He had seen nothing whatever in this case which could induce him to believe that the horse had died from the effects of the bleeding.* He associated with a great many veterinary surgeons, and all of them used the lancet.

Cross-examined.—Had been a druggist before he became a veterinary surgeon, and was about three years at the college.

By the Judge.— Had seen Mr. Sewell bleed frequently at the college in London, and never saw him use any other instrument than the lancet.

A farrier deposed to having bled some thousands of horses with the lancet.

A person who had seen the horse before it died, said he should have been sorry to give £20 for it.

The jury here expressed themselves satisfied, and returned a verdict for the defendant.

HORSE CAUSE.

OTWAY CAVE, M.P. *v.* COLMAN, *Horse-dealer, at St. Albans.*

MR. CAVE wanted a horse to carry him pleasantly in the parks. He saw and admired one (Atticus) in Mr. Colman's stables, and enquired whether he was suited for that purpose. Colman said that he could not have a more showy or finer horse; and that it would suit him well.

At Mr. Cave's request Atticus was taken into the yard, and mounted by one of the boys, when he kicked and plunged furiously. Colman expressed much surprise at this bad conduct of Atticus, and said that it must be owing to the curb-bridle, as he had never shewn such symptoms before. A snuffle bridle was then tried, but he was as unmanageable as ever. Colman then, seemingly, displayed more astonishment. "It must have been occasioned," he said, "by the horse not having been worked for two or three days."

Mr. Cave declared that he could not comfortably or safely ride a horse so viciously disposed. Colman assured him that the horse was perfectly quiet and safe; and that his present ill-humour was caused by tight girthing, or some accidental thing, and was of no consequence.

On the faith of this representation Mr. Cave bought the horse; and on the first day of his being taken into the park he began to rear and plunge, and was accordingly returned.

Colman refused to refund on two grounds: that *he had not given a warranty; or that if he had, it was of no use, as it was given on a Sunday.*

No warranty seemed to be proved; but the Judge (Baron Garrow) ruled, that the representation made by the plaintiff was a sufficient warranty; and a verdict was accordingly given for the plaintiff.

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ANATOMY OF THE HORSE.

(Continued from page 309.)

INTERNAL PARTS;

Comprehending the Cavities of the Cranium, Orbit, Nose, and Mouth.

I.—CAVITY OF THE CRANIUM.

CONSTRUCTED for the lodgement of the brain with its appendages; it is in form ovoid, flattened inferiorly, broader anteriorly than posteriorly, its antero-posterior or long diameter measures about seven inches; its transverse or lateral diameter, about four inches; its vertical or perpendicular diameter, about three and a half inches: at the same time it is to be observed, that, although the general figure of the cavity is the same, it dimensions may and do vary in different heads. The eight bones composing the cranium all present internally surfaces more or less concave, which, united, form the cavity under consideration; hence it is that the interior is not regular or uniform, but presents to view different hollows, which are adapted to distinct prominences of the cerebral mass.

DIVISION of the interior surface into roof and base of the cranium:—

THE ROOF is formed by the frontal, parietal, and occipital bones: its superficies is larger than the extent of the base, and it is without any apparently defective places, observable in the latter. It presents—1st, on the mesian line, from front to back, *the sagittal groove*, for the longitudinal sinus, formed by *the frontal* and *parietal crests*, crossed towards the front by *the coronal suture*, and bounded posteriorly by *the parietal protuberance*, to which is attached the tentorium, and behind which is *the occi-*

pital cupula, for covering the cerebellum.—2d, On either side, along the same line, *the cerebral concavities of the frontal bone; the coronal suture*, the boundary line between them and *the parietal concavities; the transverse grooves*, for the lateral sinuses; and, sunk within them, *the lambdoidal suture.*

THE BASE is formed by the temporal, sphenoid, ethmoid, and occipital bones. It presents—1st, on the middle line, from before backwards, *the crista galli*, and on its sides *the ethmoidal fossæ* and *cribriform plates*, bounded laterally by *the internal orbital plates of the frontal bones*, and then pierced by *the internal orbital foramina; the concave surface of the body of the ethmoid bone; the optic hiatus* leading to *the optic foramina; a transverse suture* between the ethmoid and sphenoid bones. Upon the sphenoid bone, *the pituitary fossa*, bounded laterally by the two *optic fossæ;* the latter leading to the foramina lacera orbitalia, over which are *the spinal foramina: a transverse elevated line* denotes the place of junction of the sphenoid with the occipital bone. Belonging to the occipital bone are *the basilar fossa* and *the occipital hole.* 2d, On either side, in the same direction, *the internal surface of the wing of the ethmoid bone*, rather more convex than concave, for the support of the anterior lobe of the cerebrum; *the concavity of the wing of the sphenoid bone*, for the reception of the middle lobe; *the concavity of the squamous part of the temporal bone*, for lodging the posterior lobe: and the sutures bounding these three cerebral surfaces. *The foramen lacerum basis cranii*, formed between the wing of the sphenoid anteriorly, the basilar process of the occipital bone internally, and the petrous portion of the temporal bone externally and posteriorly: it is wide and irregular before, narrow behind, and is distinguished into *the spheno-occipital* and *temporo-occipital hiatus.* THE PETROUS PORTION OF THE TEMPORAL BONE, presenting a narrow triangular surface forwards and upwards, which contributes to the posterior cerebral concavity; a broad smooth but uneven surface inwards, against which inclines the cerebellum, and upon which we distinguish—*a*, the orifice of *the meatus auditorius internus; b*, a *transverse prominence*, and several *cerebral indentations; c*, an irregular convexity downwards, which forms the boundary wall of the labyrinth; *d*, *a fissure* separating it from the former. Lastly, *the sutures*, uniting the petrous to the squamous portion and to the occipital bone. THE OCCIPITAL BONE, a part of the internal surface assisting in the formation of a concavity for the cerebellum, by the convolutions of which it is indented; the surface even and smooth, and slightly excavated below this, for the support of the medulla oblongata; still lower, *the condyloid foramina*, through which the ninth pair of nerves pass out.

II.—THE ORBITS,

Two in number, are formed for the lodgement, attachment, and protection of the eyes and their appendages.

Figure.—Symmetrical. The cavity, which is extended horizontally backward and inward, has, viewed in front, a pyramidal aspect: the base, represented by the front, has four sides and four angles; one only of the sides, however, is sufficient in extent to reach the apex, the others being all more or less imperfect. A line drawn in the horizontal direction through the axis of this figure, inclines more outwards than forwards, more forwards than downwards, intersecting another horizontal line projected directly forward at an angle of about 70°, and one extended laterally, directly outward, (at right angles with the former) at about 20°: the inclination downward, however, will in course vary with the erect position of the head.

Structure.—The orbit is composed of unequal portions coming from four of the bones of the cranium, and from three of those of the face: viz. the frontal, ethmoid, sphenoid, and temporal bones; the malar, lachrymal, and palate bones.

Division.—Into sides, angles, base, and apex.

SIDES.—THE SUPERIOR SIDE or roof of the cavity consists only of *the frontal arch;* which is concave and smooth internally, to make room for the lachrymal gland, and has anterior and posterior borders, slightly curvated. THE INFERIOR SIDE or floor of the orbit is formed by *the orbital surfaces of the lachrymal and malar bones,* is broader than the roof, though, like it, is deficient as a whole. It comprises *the orbital portion of the lachrymal suture:* it is terminated, in front, by *a smooth, rounded, curvated border;* behind, nearly midway between the base and apex, by *a shorter and straighter border.* THE INTERNAL or NASAL SIDE, the broadest and only complete one, is formed principally by *the internal orbital process of the frontal bone,* into the notch of which is received *the os planum; the ethmoid bone* further contributes, and also *the sphenoid* and *palate bones,* the three constituting that irregular termination of the cavity behind which represents the apex. The frontal orbital plate is smooth and slightly concave, and is united below by a continuation of *the transverse suture* with the lachrymal bone. Its *border in front,* though slightly curvated, is *very irregular,* having several notches and *one* or *two small foramina* in it; it also presents *a little tubercle,* to which the lachrymal caruncle is attached. THE EXTERNAL or ZYGOMATIC SIDE is formed principally by *the zygomatic process of the malar bone,* that of the tempora contributing but little: it is concave and smooth

internally, somewhat broader below than upwards; is intersected obliquely by the zygomatic suture, and has an anterior border, smooth and curvated; a posterior one, sharp and straight.

ANGLES.—THE SUPERO-INTERNAL ANGLES, one before, the other behind, are formed by the beginning of the frontal arch, through which, midway between them, passes the supra-orbital foramen. The infero-internal angle includes *the lachrymal fossa*. THE SUPERO-EXTERNAL ANGLES, one anterior, the other posterior, are intersected by the *suture* uniting the frontal and zygomatic arches. The infero-external angles, particularly the anterior, are rounded and smooth.

BASE.—Of the circumferent border, the superior and internal parts, about two-fifths of the entire circle are formed by the os frontis; the inferior and internal parts, about one-fifth, by the lachrymal bone; and the remaining two-fifths by the malar and temporal bones, in the proportion of three parts of the former to one of the latter.

THE APEX or back of the orbit, formed by the ethmoid, sphenoid, and palate bones, is pierced by five foramina; the two round are *the internal orbital* and *optic*, which are ranged in a row with two oval and larger in size, *the supero-posterior* and *infero-posterior orbital:* the one behind is *the spinal foramen*.

III.—CAVITIES OF THE NOSE,

Comprehending the nasal fossæ or chambers, and the sinuses. These cavities occupy about two-thirds of the internal space of the superior maxilla, the remaining third belonging to the cranium, from which they are partitioned by the cranial septum of the frontal bone, in union with the cribriform plates and crest of the ethmoid.

THE NASAL FOSSÆ may be said to include about two-thirds of the entire space devoted to the olfactory cavities. They constitute the interior of the proboscis; have four boundary walls, one above, one below, and two laterally; are separated from each other by a septum; but are open both before and behind.

THE SUPERIOR WALL presents an irregular concave formed by the internal surfaces of the nasal bones, the cells and grooves of the ethmoid, and small portions of the nasal surfaces of the palate bones.

THE INFERIOR WALL is horizontal; it extends forwards beyond the superior, but is considerably overreached by that wall posteriorly: it is formed by the palatine portions of the anterior and superior maxillary, and by the palate bones. The surface is transversely concave, and presents a slight eminence a little behind its middle.

EACH LATERAL WALL OR SIDE presents an irregular concavity, and is formed by the anterior and superior maxillary and the palate bones. To it are attached the superior and inferior turbinated bones, by which the fossa is divided into three separate passages or meatus. *The superior meatus*, comprised between the nasal and superior turbinated bones, extends from the angle of the lateral nasal opening passing over the ethmoidal cells, to the cribriform plate, following superiorly the declination of the wall. *The middle meatus*, included between the turbinated bones, leads superiorly into the ethmoidal grooves and cells, and into the sinuses of the head, and ends below beneath the termination of the superior. This passage, like the former one, is narrow; but its greatest diameter is, obliquely, in the perpendicular direction; whereas the other measures most from side to side. It receives the apertures of the ductus ad nasum, maxillary sinus, ethmoidal grooves, and turbinated cells. *The inferior meatus* is the most capacious as well as most direct one: it extends along the inferior wall, from the anterior to the posterior opening of the nose.

THE SEPTUM NASI is the partition separating one fossa from the other. It is formed, posteriorly, by the ethmoidal plate; inferiorly and posteriorly, by the vomer; superiorly and anteriorly, (and principally) by a broad perpendicular plate of cartilage.

THE OPENINGS OF THE NOSE are,—*The anterior*, divided by the nasal peak and septum nasi into two, and formed by the superior borders of the anterior maxillary bones: *the posterior*, divided after the same manner by the vomer and septum, and formed by the nasal surfaces and crescentic borders of the palate bones.

THE SINUSES OF THE HEAD communicate with, and may be said to constitute, part of the nasal cavities. They are the frontal, nasal, maxillary, sphenoidal, ethmoidal, and palatine.

THE FRONTAL SINUSES, formed within the frontal bones, are so situated, that a straight line extended between the superointernal angles of the orbits passes opposite to about the angular or deepest parts of their cavities. The sinus, on either side, has a triangular figure. *The superior side* or roof is flat, and (barring the septa) even upon its surface; whereas *the posterior side* is irregular, being convex, inwardly, where it is formed by the cranial septum; concave, outwardly, where it is opposed to the part composing the temporal fossa. The inferior side slants from behind forwards, and from below upwards, is irregular on its surface, and open or deficient outwardly, where the cavity communicates with the maxillary sinus. Of the *angles*, one is directed upwards; another downwards, terminating in the nasal sinus, with which it is conjoined, the two forming one continuous cavity; the third points backwards, and is directly

opposite to the imaginary line above alluded to. The cavity is traversed and divided into several unequal open apartments and recesses by *septa;* the principal of which is one extended between the superior and inferior sides: it is partitioned from the opposite sinus by the nasal spine. The sinus is but small in the young compared to its proportionate dimensions in the adult subject: it continues to increase afterwards with age, and at length extends throughout the whole of the frontal bone.

THE NASAL SINUSES, formed by the nasal bones above and the superior turbinated bones behind, are nothing more than the cul-de-sac or blind terminations of the frontal sinuses.

THE MAXILLARY SINUSES, the largest of these cavities, are spacious but very irregularly formed. They are situated below and in front of the frontal. Of this sinus, on either side, the posterior and external walls are formed by the malar and lachrymal bones, whose orbital processes constitute a thin partition between it and the orbit; the inferior parts are excavations in the superior maxillary bone; superiorly the sinus is open, being there continuous with the frontal: the boundary line between these cavities is marked by the suture uniting the lachrymal to the frontal and nasal bones on the outer side, and by the prominent crest formed by the junction of the superior turbinated ethmoid with the bone on the inner; underneath which, through a curved (and in the recent subject sort of valvular) fissure, this sinus opens into the middle meatus, between the bases of the turbinated bones. This cavity is but small, and still more irregular, in the young subject, in consequence of the intrusion of the yet uncut molar teeth.

The frontal sinus, then, terminates in the nasal, but both discharge themselves into the maxillary; the maxillary has also a blind termination, but empties itself into the posterior end of the middle nasal meatus.

THE SPHENOIDAL SINUS is situated within the palatine portion of the body of the sphenoid bone. It has no existence in the young subject, the bone being solid throughout; but in progress of growth a cavernous hollow is formed, which, from the secession and attenuation of the laminæ of the bone, continues to enlarge. It communicates, by two ovoid openings, with the ethmoidal sinuses.

THE ETHMOIDAL SINUSES are two cavities, separated by the perpendicular plate, and situated beneath the ethmoidal cells. They have openings in front, communicating with the lowermost and largest grooves of the same bone, and with the palatine sinuses.

THE PALATINE SINUSES are formed between the superior

maxillary and palate bones; are situated below and in front of the former; are separated from each other by the vomer; and open into the maxillary sinuses: they are irregular in form and cavernous interiorly. They are not to be found in the young subject. Some might be inclined to treat them as parts of the maxillary sinuses; they are, however, as distinct from the latter as the frontal are.

IV.—THE MOUTH.

The mouth is the cavity included between the superior and inferior maxillæ, making one common vacuity with the intermaxillary space. Its antero-posterior dimensions can be but little varied; but its supero-inferior diameter will be increased in the ratio of the distance to which the inferior maxilla recedes from the superior; the cavity during the separation of the jaws assuming the figure of a misplaced ⋗, the angle of which is turned backwards.

The mouth is formed—superiorly, by the palatine and superior and anterior maxillary bones; inferiorly, by the inferior maxilla; laterally, by the molar teeth; anteriorly, by the incisive teeth. Behind, through the posterior opening of the nose, it communicates with the nasal fossæ.

Communications and Cases.

Quidquid agunt *Veterinarii*
——— nostri est farrago libelli.

ON AMPUTATION IN COMPOUND FRACTURE OF THE EXTREMITIES IN CATTLE.

By Mr. Dick, *of Edinburgh.*

To the Editor of The Veterinarian.

Sir,

I HAVE long thought that a periodical such as The Veterinarian was much wanted among the veterinary profession, as a means by which many useful, curious, and interesting cases might be brought forward, which otherwise are lost. Amputation, for example, has not I believe hitherto been considered as a veterinary

operation ; I therefore send the following account of cases, where that operation has been successful in cattle. About the end of June, 1827, I received a letter from Mr. William Laing, of Banchory, Aberdeenshire, an old pupil, requesting my advice, regarding the propriety of amputating the leg of a valuable milch cow, which had met with a severe compound fracture of the lower end of the metacarpal bone of the off fore leg; in consequence of which, sloughing had taken place to such an extent, that there did not appear to be a chance of saving the limb. Under such circumstances I stated that it appeared to be the only means likely to save the animal's life, (which was a matter of considerable importance, as the animal was a great favourite). And on the 20th September following, I had another letter from the same person, from which I give the following extract : he says, " I performed amputation upon the cow on the 7th July : after having properly secured the animal, and applied a tourniquet above the carpus, I made a circular incision through the integuments round the leg, a little below the carpus, and having separated the skin so as to allow of its being pushed up a little, I cut through the sinews, and lastly sawed off the stump : the parts are now completely whole, although she has been going at grass all the time, and, now that she has got the advantage of a cork stump, makes a wonderful shift for herself, and yields a good supply of milk to her owner."—Mr. Dodds, Kirkcaldy, informs me that he has also amputated the leg of a two year old heifer. And I was informed of a third case, on Saturday last, in which the limb was removed above the tarsus; but as it had only been done a few days before I heard of it, and as I did not get the particulars, I refrain at present from stating any thing further respecting it.

I am, Sir,

Your most obedient servant,

Edinburgh, 20th August, 1828. WILLIAM DICK.

THE VELOCITY OF THE CIRCULATION OF THE BLOOD.

(Communicated by M.)

M. HERING, of Stuttgart, has made some novel experiments on the velocity of the circulation of the blood in the horse. The subject had been often discussed, and many ingenious and elaborate calculations had been formed, but the result had been uniformly unsatisfactory. If the action of the heart be the moving

power, the force of that organ has never been ascertained. It is estimated by some at a few ounces only, and by others at nearly two hundred thousand pounds. Supposing, however, according to the statement of some physiologists, that the blood be propelled into the aorta at each contraction of the left ventricle with a velocity of 120 feet in a minute, that velocity will soon diminish with the calibre of the vessel and the tortuousness of its course, and will not be the same in any two portions of the frame.

The enquiries of other philosophers have not led to a more definite result. They have calculated the quantity of blood contained in the vessels, and the quantity which the ventricles of the heart will contain; then, dividing the general mass by the contents of ventricles, they have the number of pulsations in which a complete circulation of the fluid takes place. There are, however, some unfortunate and insurmountable difficulties attending this computation. The number of pulsations in a given time differs widely in different species of animals, and in different animals of the same species; and the capacity of the ventricles differs yet more. It is well known to every veterinarian that the left ventricle is, in some full-grown horses, twice as capacious as in others. In the right ventricle this variation is yet more remarkable. As, therefore, the actual quantity of blood cannot be ascertained, nor the capacity of the ventricles scarcely guessed at, a calculation of the pulsations will afford a very imperfect estimate of the rapidity of the circulation.

M. Hering has adopted a much more satisfactory method of experimenting. He sought out some substance readily soluble, easily detected in the minutest proportion by certain chemical tests, and which, mingling with the blood, would not materially affect the circulation. He fixed on the hydrocyanate of potassium. He dissolved one drachm of it in eleven drachms of water, and he found that he could detect it in the serum in the proportion of one part in 20,000, by means of the sulphate of iron. He opened the jugular, and introduced two or three ounces of the solution into the vein. He did not inject it, because he would not add to the force of the circulation, but poured it into a funnel, and thus suffered it to mingle with the blood. He then, at short intervals, drew blood from various parts of the body; and when the serum was separated, exposed it to the action of a solution of the sulphate of iron. If a blue precipitate was formed, it indicated the presence of the hydrocyanate of potassium. The results will interest the readers of the Veterinarian, and surprise many of our physiologists.

In from twenty to thirty seconds the hydrocyanate passed from one jugular to the other; it reached the submaxillary

artery on the other side in from ten to twenty-five seconds; and the artery of the pastern of the hind extremity in from twenty to forty seconds. An increased frequency of pulse did not indicate an increased rapidity of circulation. The hydrocyanate reached the same point in the same time, under very considerable variations in the number of pulsations.

In a space varying from two to eight minutes it was secreted by the serous membranes, but in a small quantity.

From the mucous membranes it was excreted more slowly, and in the following order:—the villous portion of the stomach, the intestines, the respiratory organs, the urinary and genital system. Where the mucous membrane was covered by an epithelium, as the eye, mouth, œsophagus, and cuticular portion of the stomach, no excretion could be perceived.

In one minute the hydrocyanate was found in the cortical and sometimes in the tubular substance of the kidneys.

In one minute it was conveyed from the jugular vein to the thoracic duct; but could not be always detected in the lymphatic glands.

In a short time it was eliminated from the blood; and in twenty-four hours could not be discovered in any of the solids.

Zeitschr. für Physiol.

EXCISION OF A PORTION OF THE OMENTUM PROTRUDING FROM A WOUND.

By Mr. J. Bean, *of Stockton.*

ON the morning of the 4th of May, 1827, I was requested to visit a three-year-old mare, the property of Mr. H. a neighbouring farmer, which, to use the man's own expression, had something hanging out of her belly. On my arrival, I readily perceived the pendulous substance to be the omentum, occasioned by a cow running her horn through the parietes of the abdomen, about three inches posterior to the cartilago ensiformis, and about two inches and a half on the left side of the linea alba. The protruding part (about twelve inches in length) was quite cold; one fold was agglutinated to the other by adhesive matter, and the blood vessels were turgid in consequence of the strangulation of the part. The pulse was sixty, full and compressible; and the mare evinced no symptoms of pain. I removed with the knife all the protruding part of the omentum, and returned the strangulated portion into the cavity of the abdomen. I then placed a compress over the wound, retained in its situation by a broad flannel bandage round the

body, and kept wet by the frequent application of water.—Six quarts of blood were subtracted. Hydrarg. submur. ℈ij. given, and in the evening of the same day, ol. ricine Oij.

5th.—This morning her bowels are open; pulse fifty-four, appetite good: gruel only allowed.

6th.—Pulse sixty-five, and rather thready; anxiety of countenance, restless, paws her litter: purging ceased. V. S. repeated to four quarts; clysters of warm water frequently administered, and fomentations to the belly continued.

7th.—Pulse forty-nine, bowels regular, and appetite good: a small mash given. Dressed the wound with tinct. myrrh. From this date the mare did well; and on the 23d of May the wound was quite healed. The compress and bandage were continued some days. The mare returned to her ordinary work on the 3d of June, and has continued well to the present date.

RUPTURE OF THE COLON.

[*By the same.*]

A BROWN mare, aged and fat, the property of Mr. Hugil, of Eston, was on the 22d of October, 1827, supposed to be ill of gripes. On visiting her I found she was subject to a complaint very common amongst farmers' horses in the autumn and winter seasons, owing to wheat straw being the principal part of their food. So prevalent is the disease in some parts of the country, that it has obtained the name of wheat-straw fever. The symptoms were a thready and accelerated pulse, laborious respiration, depressed and anxious countenance, excessive constipation of the bowels, with a great collection of hardened fecal matter in the colon, which I could easily feel by introducing the hand into the rectum: the belly tympanitic, frequent lying down and stretching out the limbs, but not rolling on the back. V. S. to four quarts, hydrarg. submur. ʒj. in bol.; and four hours afterwards aloes barb. ʒj. in solution; raking and frequent clysters. The physic speedily operated, and the mare in three days got apparently well, and remained so until the 18th of November, when she was suddenly taken ill of apparent peritoneal inflammation of the bowels. I was not at home when sent for, but saw my patient at eight that evening, six hours after the commmencement of the violent symptoms, and one hour before she died. Twelve hours after death I carefully examined her. On opening the abdominal cavity, I gave exit to a large quantity of a watery fluid of a deep amber colour, and slightly mixed with fecal matter. The omentum and bowels presented one general mass of the most intense inflammation.

In separating the colon from its attachments in the epigastric and hypochondriac regions, I experienced some difficulty, in consequence of large depositions of coagulated lymph. At that part of the colon where it is returning from the left hypochondriac region to that of the epigastric, where the gut abruptly enlarges, I found a knuckle of omentum about the size of an orange, firm to the touch, and covered with lymph, adhering to it. On gently removing the tumour, I perceived an opening into the intestine into which I could pass three fingers. The omentum was adhering to about two thirds of the edges of the wound, and I presume would have attached itself to the whole, had not the escape of fecal matter prevented it. The edges of the wound were irregular, and the coats of the bowel much thickened and of a deep crimson colour. In the lungs, liver, and pancreas, there was some congestion, and the kidneys were paler than usual.

After having ascertained the cause of death, I examined the parietes of the abdomen over the seat of injury, but could not detect any marks of external violence.

Now, Mr. Editor, whether the above disease was produced by an external agent, or by ulceration caused by the presence of hardened fecal matter fifteen days before death, I do not pretend to say, and will leave the mystery for the better judgment of some of your correspondents to unravel.

ON CASTOR OIL, AS A PURGATIVE.

To the Editor of The Veterinarian.

SIR,

ACCORDING to my view of medical practice, a case which forewarns us of danger, and more particularly in any frequented course of action, is hardly less worthy of record than one which leads us to an improved and successful treatment: in this light appears to me the one I now send you.

In April 1822, being at the time engaged in experimenting on the efficacy of various medicines reputed to be purgative, I administered to a horse (having a farcical affection of the near hind leg) who had been prepared for the operation of a purge by mashing and the deprivation of hay, a pint of castor oil. He took his medicine about 10 o'clock in the morning, and at 3 in the afternoon shewed signs of depression, languor, and nausea, although the pulse had become somewhat augmented. Towards

the evening this state of apathy was becoming quite alarming: his belly was exceedingly contracted; his flanks tucked up, and his hind legs advanced as far forwards as possible; in which posture he seemed to be suffering considerable internal abdominal pain, though not of that acute kind which excites disquietude or convulsions, yet such as to prostrate the animal's spirits to the lowest degree, while it raised the pulse to 70.

Next morning I found him still in the same posture; indeed it seemed that he had remained so all the night: I do not know that I can describe his awkward but remarkable appearance better than by saying that he was "all in a heap." He was with difficulty made to turn in the stall; and when walked out he evinced so much stiffness, that he seemed to have rheumatism in all his limbs. Notwithstanding this, however, as there were no signs of purgation, he was compelled to take walking exercise. The symptoms, at this period, left no doubt in my mind that the horse was suffering to a very considerable degree from abdominal irritation; although the pain was not of that kind or degree which gives rise to the disturbance known by the vulgar phrase "gripes."

In the afternoon, the animal was found lying down, occasionally stretching himself out and groaning, but yet not shewing any symptom of spasms.

He has eaten scarcely any thing since the attack, but has drunk copiously; and has been raked, and had stimulating injections administered every two hours.

At 7 o'clock in the morning, he continued lying; had his legs drawn up under him; his belly was sunk, and had a tympanitic appearance: altogether his posture betokened considerable suffering. While standing looking at him, he made several efforts to rise, but, either from pain or exhaustion, appeared quite unable to accomplish it. It was determined then, if possible, to raise him upon his legs by force; which was no sooner effected than we were surprised by an exceedingly copious *fluid* evacuation, the first of the kind he had had since the drench: from this he became so much relieved, that no sooner was it passed than he commenced feeding.

At 9 o'clock, he was lying down again, manifesting fresh uneasiness, not having had another motion. V. S. ad ℔viij. Applic. abdom. liniment. lyttæ. Cont. enem. In an hour afterwards he experienced relief, and from that time remained free from relapse during the night. On the following day we procured several purgations, every one of which were followed by very evident relief.

Although from this day the danger impending over the case

appeared to be gradually diminishing, still it was some weeks before the animal recovered his wonted spirits and former condition.

Now, Mr. Editor, I do not send you this case, as I forewarned you, to boast of a cure; neither do I wish it to stand against me as an instance to shew that I was or am an unwarrantable experimenter in my practice, and for this reason you must excuse me from sending either my own name, or that of the party to whom the horse belonged; but I send the case to you to answer the same purpose that an anchored buoy does at sea,—to enable my brother professionals to steer clear of the shoals and quicksands. I know it is by no means an uncommon practice, if not among veterinarians, yet among sportsmen and grooms, especially in cases of worms, to prescribe *castor oil*. I would have them, to use their own language, "have a care." This is the second case that has occurred to my knowledge. In the former one, which happened in the practice of a relation of mine, the horse *died*. I believe, myself, that not less than a pint, even of the best oil, will produce a decidedly purgative effect; and this quantity I take to be hazardous and unsafe in its operation: but I should very much like to hear what you, or some one of your able and experienced correspondents, say on the subject.

In the mean time, believe me to have too much regard for my patients to make them the subjects of dangerous experiments, though no one more than myself laments the chasms that remain to be filled up in our medical practice. Your's,

AN INQUIRER.

COMPARATIVE ANATOMY.

FACTS CONNECTED WITH THE ANATOMY OF VARIOUS DOMESTIC ANIMALS.

By H. W. DEWHURST, *Esq., Lecturer on Human and Comparative Anatomy.*

HAVING, in a former number of *The Veterinarian*, called the attention of the students to the study of comparative anatomy, I now forward a few facts connected with the anatomy of the domestic animals; and in doing so, I shall commence with the domestic cat, which stands, according to the classification of my worthy teacher Mr. Brookes, as follows:—

Class.... Mammalia.
Order.... Prædacea.
Section... Carnivora.
Family... Felidæ (*Digititradæ*).
Genus.... Catus.
Species... Catus Domestica.

In the cranium of this animal there exists a curious peculiarity when compared with man and other animals; and I wish to point out this fact to the comparative anatomical student. If he refers to the parietal bone of this animal, he will find a beautiful process of bone, about one-eighth of an inch, and in some half an inch wide, extending into the cavity of the cranium, thus dividing it completely into two cavities: the larger or anterior I denominate the cerebral, from its containing the cerebrum; and the lesser or posterior contains the cerebellum, and, not having found it described in the works on comparative anatomy I possess, I name it the *tentorial process* of the parietal bone, for this very obvious reason, that, when the two parietal bones are united together, they form and answer all the purposes of the *membranous tentorium* in the human subject.* It is ossified at very early stage of utero-gestation; this I have found from actual dissections of pregnant cats, whom I strangled, and on whom I afterwards performed the cæsarian operation; and to those who never witnessed the fact, a more beautiful anatomical and physiological illustration cannot be witnessed than the circulation of the blood—the collapsed state of the lungs, gorged with venous blood—the systolé and diastolé of the heart—the peristaltic motion of the intestines—and lastly the fœtuses in utero—and the enormous tortuous venous sinuses on the surface of the uterus, which, like the same organ of most animals, is *bicorned*, and between the cornua, just above the os uteri in the uterus, is a small membranous septum: the uterus is of a greyish-blue colour, caused, I have no doubt, by the numerous blue veins which ramify through its substance. The *placentæ* are circular, and completely envelope the fœtus, which may be seen in motion at a very early period of its pregnancy. In the fœtus, the thymus gland is large and similar in shape to the human subject; the bones of the head are completely closed at birth, and the eyes of the fœtuses, previous to and after the formation of the *fur*, are covered by a membrane, which, from a cursory view, appears transparent, but rendered of a greyish colour, by the dark hue of the eye beneath. The cells of the ethmoidal bone are horizontal, and form a great extent of surface for the ramification of the

* In the dog, an osseous and a membranous tentorium exists; but, with the Editor's permission, I will embrace the peculiarities of the canine family on another occasion.

schneiderian membrane and olfactory nerves, constituting a greater range for the sense of smell, so peculiar in the carnivora. Another peculiarity in this, and the family *canidæ* generally, is the foramina existing in the os brachii for the passage of the brachial artery: I once saw this in the human subject, but here it was an anomaly, but in the *families* already mentioned I believe it is always found. The ribs are thirteen on each side, and the sternum is composed of five or six pieces of bone, united by cartilage, and is long and narrow, and on which the apex of the heart is supported. There exists a xyphoid cartilage, and I once examined an old cat in which it was ossified. The caudal vertebræ I have generally found to be twenty-three, but Dr. Fyffe, in his Outlines of Comparative Anatomy, says they are but twenty-two: possibly they vary, and we may be both correct. This animal possesses no uvula. The teeth are,

Tusks . . . 4 . . . . . 2 superiorly and 2 inferiorly.
Incisores 12 to 14 . . 6 or 7 ditto and 6 or 7 ditto
Molares 12 . . . . . 3 . . . . ditto and 3 . . . ditto on each side.

The coronoid process of the lower jaw projects considerably above the arch of the zygoma. At the posterior and external margin of the orbit, is a small space, which is filled up with cartilage. This animal possesses the frontal suture, if such it may be called, being merely a line of separation between the two frontal bones. The mastoid processes are smooth, round, and hollow within, not like the human mastoid process, which is cellular internally, and adapted for the origin and insertion of muscles, being rough and scabrous on its surface. The intestines of the cat, according to Dr. Fyffe,* measure as 6, taking the body as 1; but in the wild cat only 3 to 1. The intestines are considerably dilated, and the colon is very short, but possesses no transverse arch, or appendix vermiformis cæci, which last is only found in man and some of the quadrumana. The external angular process is very acute, and also the temporal portion of the orbital process of the os jugale is similar. The anterior palatine foramina are two in number, whereas in man there exists but one. The lower jaw is united at its symphysis by means of synchondrosis, i. e. an intervening cartilage. The posterior part of the cranium exhibits a spinous process; and, surrounding the foramen magnum occipitale, near the margin of the os occipitale, are two triangular spinous processes, to which the superior muscles of the neck are inserted. The pericardium is very transparent, through which the motions of the heart can be seen. The liver is composed of five lobes, three on the right side, two on the left, and the lobulus spigelii. The gall-bladder exhibits the usual ap-

* Outlines, p. 131.

pearance, and not dissimilar to the same organ in the human subject: the *ductus communis choledochus* is very tortuous, and can be seen terminating in the duodenum. The spleen is long and narrow, and there are no supra-renal glands attached to the kidneys; the renal veins ramify on the surface in most animals of this class; these organs are not enveloped in peritoneum, but possess a proper *tunica propria*, and exhibit a beautiful appearance. Another peculiarity, and with which I shall conclude the present communication, is that of the aorta, and which is a remarkable deviation from the human subject. The arch arising from the aorta, instead of being transverse is conical, and only gives off two arteries instead of three, as in the human subject. The same fact is to be noticed in the dog and rabbit. The largest, or what I call the arteria innominata, trifurcates, giving off the right subclavian and two carotid arteries, while the left subclavian arises separately. With the exception of the part where I have quoted Dr. Fyffe, the above are observations from my own dissections; and I shall be happy to assist any gentlemen in making comparative dissections, more especially exotic animals; and for the loan or presentation of any specimens, I shall feel much obliged.

Sept. 15, 1828.
38, *Queen Street, Waterloo Road.*

CASE OF DISEASED RECTUM.

By Mr. Daniel Moulden, *Winchester.*

IT is with pleasure I avail myself of the opportunity which now offers, through the medium of your useful publication, "The Veterinarian," of submitting for the perusal of the profession the subjoined case of diseased rectum.

On the 15th of June, 1819, I was applied to by James Goldsmith, Esq., of Milton, near Portsmouth, to examine a black horse, that had been ill for eight months; voiding his fæces with difficulty, and in an oblique direction. I passed my hand up the rectum, and found a large tumefaction, about eight inches long, three inches in thickness, and nearly six in width. I ordered him to be sent to my stable, and on my arrival desired my servant to foment the part for an hour. I passed both index fingers within the verge of the anus, and could see plainly the nature of the tumour, and the sinuses, which discharged, very copiously, thick healthy pus. I injected a solution of sulphate of zinci cum hyosciami ext. This application was had recourse to twice only. I gave him at night hyd. sub. ʒij, cum sapon. dur.;

the next morning a saline draught, which was repeated at noon and evening. The next day the same, which operated very copiously. The following day I gave him an opiate; and the next day repeated the saline draught, as before. I then passed my hand up the rectum, and found the tumour had nearly subsided. On the fifth day I gave him calomel, as before, and repeated the saline draught on the following day. On the seventh day he left my stables, perfectly recovered; and has continued well to the present moment.

THE VETERINARIAN, OCT. 1, 1828.

"Licet omnibus, licet etiam mihi, dignitatem *artis veterinariæ* tueri."—*Cicero.*

VETERINARY EXAMINING COMMITTEE.

WE reluctantly return to the constitution of the medical examining committee. We have heard from too many quarters to permit us to doubt the fact, that some of the remarks which we and others have thought it necessary to make on a recent decision of that committee have not been received quite in good part, and that complaints, and hints, and threats of resignation have fallen from certain influential members.

We sincerely regret that this should have been the case; we trust that it was merely the expression of momentary feeling; and we would beg leave once more, and we would fain hope not quite without success, to argue the matter with these gentlemen calmly and respectfully.

It is expedient that there should be satisfactory proof of the acquirements and skill of the pupil ere he assume the title of veterinary surgeon, and the persons who are to decide whether the candidate "is qualified to practise the veterinary art in all its "branches," should be perfectly acquainted with the subject. It is indispensable that *they* should understand "the veterinary "art in all its branches."

At the establishment of the college, such men could not be found. Even St. Bel was incompetent, and much more so was the present professor at his first appointment. It was necessary, however, that there should be an examining committee, and the best was selected that could then be obtained. Those medical gentlemen who had so laudably and zealously exerted themselves in the foundation of the college, who were familiar with the general principles of physiology and pathology, and who were comparative anatomists, were requested to assist the professor in this important inquisition, and assurance was thus given that no ignoramus or mere pretender should disgrace the infant art.

There seemed, even at that time, to be a feeling that necessity alone could justify the appointment of a committee thus constituted, and that medical men were not, and could not be duly qualified for the office; for it was determined, that none should be selected as examiners who had not delivered, or who were not delivering lectures connected with veterinary science. These lecturers had liberally and gratuitously opened their theatres to the veterinary pupils; they had thus identified themselves with the improvement of veterinary science, and in them, in the present state of things, both the student and the public could best confide.

Was it, or could it have been imagined that this arrangement should be permanent? Was it contemplated, that, when thirty years had elapsed, and veterinary science had considerably advanced; and, notwithstanding all the lamentable imperfections of our education, prejudice could not deny that there were some few, at least, who to an accurate acquaintance with the fundamental principles of general physiology added a complete knowledge of "veterinary practice in all its branches;"—*when the necessity which gave rise to this incompetent committee had ceased to exist;* was it, we ask, contemplated that the radical defect of the examiners' board should not be repaired? Would not common sense and common justice dictate, that, when they who alone were fully qualified to discharge the duties of the situation had begun to appear, they should (no, not supersede, but) gradually amalgamate with the others, to whom courtesy and grati-

tude, as well as dire need, had at first delegated the power of determining on the qualifications of the students?

Can it be necessary to urge the point? The present committee, with the exception of the professor and his assistant, *are incompetent*. They are ornaments to their own profession, but *they know nothing practically of ours*. There are now many veterinary surgeons fully qualified to decide on the merit of the pupil. Will any one tell us, why an incompetent committee should be continued, when a better and an unexceptionable one could be easily selected?

When, therefore, we are refused that which we claim as our right, and which justice to the profession and to the public demands; and when the powers that be, will not condescend to assign one reason for their rejection of our claim, but refer us to a law enacted they well know for what purpose, and with what feeling, and which the slightest expression of their wish would cause to be immediately abrogated; can they wonder at our being somewhat indignant, or using a warmth of expression approaching even to invective, and which in general cases would not be warranted? "Where's the distance throws us back so far, but we may boldly speak in right, though proud oppression will not hear us?"

We once more repeat, and *we challenge contradiction*, that it was the unanimous and strongly expressed opinion of the subscribers, at their annual meeting, that the profession would be benefitted by the addition of a certain number of veterinary surgeons to the examining committee; that Mr. Coleman, in the most unequivocal terms, declared his perfect conviction of the propriety of the measure, and his hope that the examining committee, whatever previous reluctance they might have felt, would be induced to comply with this expression of the opinion and wish of the subscribers; and that (did we feel ourselves at liberty to report the result of private communications) *more than one* of the examining committee acknowledged the propriety of the proposed arrangement. We might likewise assert, that we have not conversed with a single well-informed, or sporting, or medical man, who has not, without hesitation, and even in stronger lan-

guage than we should dare to use, expressed his decided conviction of the justice of our demand. To this we will add, that there is but one feeling pervading the whole profession. We call on the committee to produce a single dissentient voice.

The committee have taken upon themselves the full responsibility and odium of the refusal. The subscribers and governors wished for a change—the professor earnestly advocated it—the whole body of veterinary surgeons demanded it—the public, so far as the case had come before them, entertained but one opinion; and the medical examining committee have set all this at defiance, and see no reason to change the present system. Is it, then, surprising that some of us should express ourselves in no very measured terms? Have the committee a right to complain? We have the common sensibilities of men; we are zealous for the respectability of our profession, and we cannot and will not suppress what we feel.

There is a mystery about the affair which we cannot develope. There has been egregious misrepresentation, or most unaccountable misapprehension, somewhere. We accuse no one, but we do marvel much.

If some of our brethren, under the consciousness of supposed indignity and oppression, have gone a little too far, we regret it. We regret the effect which may have been produced on the minds of those with whose names esteem and gratitude will ever be associated; but we do frankly confess that we cannot very severely blame them.

Let us suppose for a moment that ours had been the elder art, or that, by some strange freak of fortune, a dozen of the best of our veterinary surgeons had obtained possession of the censors' board at the physicians' college, or that of the examiners at surgeons' or apothecaries' hall, and we think that, degraded as we are, a dozen of us might be selected who would evince no discreditable knowledge of the general principles on which our kindred professions are founded. Let us suppose that, ignorant of the application of these principles to the practice of human medicine, we were, in defiance of common sense, and the stern remonstrance of the united body of medical men, and the unanimous voice of the public, to persist in excluding from the board those who

alone were competent to discharge the duties of examiners,—what would be thought and said of us? Would any language be too strong, any expression of indignation unjustifiable, while reprobating such an union of ignorance, injustice, and oppression?

"Mutato nomine," we are almost inclined to say to every member of the veterinary medical committee, "de te fabula narratur."

We would earnestly entreat them to reconsider their late decision, and listen to the voice of common sense, justice, propriety, honour, and public opinion; or, if they will not accede to our demand, let them, at least, condescend to assign some reason for their proceeding. Let them not treat us quite so cavalierly and contemptuously. Let them prove to us that we require what cannot, with propriety or benefit to the institution, be granted. We are open to conviction, and our pages are much at their service.

We have heard it whispered, that some of the following cogent reasons were urged by Sir Astley Cooper and Dr. Babington in justification of our exclusion from the examiners' board:—

"There are no instances in the history of veterinary science in "which simple veterinary surgeons have been associated with the "professors of the school, in deciding on the qualifications of the "pupils." We will presently enquire into the accuracy of this statement, but we must previously tell you, gentlemen, that there are no instances in which *human surgeons* have been thus associated; and if the practice of other schools must decide the constitution of ours, the human practitioners, who occupy every seat but two at our examiners' board, have no business there. If, their argument be good for any thing, it goes to this extent; and if we are to be excluded, we shall be, or we ought to be in good company.

But the fact is not as these gentlemen state. When it was a matter of experiment and doubt, whether the veterinary school at Alfort could maintain its ground, or would be of extensive public utility, a few professors only were appointed, in the same manner that a professor and one assistant were deemed sufficient at the establishment of the veterinary school at St. Pancras.

Professors are but men. However sincere they may be, they are occasionally swayed by interest, and they are the creatures of prejudice; and therefore it was not deemed proper, in the

infant schools of England or of France, to trust the reputation and future fortune of the pupil to the decision of one or two men. At St. Pancras, certain eminent and honourable practitioners of human medicine were associated with the professors of the college, because we had no veterinarians to place there; but in France, where the art had been longer and better studied, the veterinary surgeons practising in the metropolis were formed into a jury, before whom the students were to appear, and by whose decision they were to stand or fall. (Vide *Instructions Vétérinaires*, tom. i, 87, and tom. iii, 45.)

When the experiment had been fairly tried, and the public interest and the public voice demanded the permanent establishment of the French school, every instruction which was necessary for the perfect education of the pupil was provided for within the walls of the college, and no less than seven professors were appointed. They could not all be influenced by favouritism, and to a court thus numerously constituted the decision might safely be left. Yet even on these seven a very important restraint was laid. Their meetings were held at specific times. *They were public.* The friends of the pupils, the friends of the art, might be and were present, and one of the chief officers of government presided at the sitting.

When the time arrives, and it is near at hand, that a more adequate system of education is adopted in the English veterinary school,—when the pupils receive *at* that school, and *from the professors of that school*, all the instruction which is requisite to enable them creditably "to practise the veterinary art "in all its branches,"—when (we ask not for the whole seven of the French college) four or five professors are, as they ought to be, appointed, and the meetings of the examiners are held at specific and well-known times, and are *public*, we will withdraw our suit; we will fully entrust to such persons the office of censors, for they will not, they cannot materially do wrong, and those only will be admitted to practise who will not disgrace the profession. But while, for many years, we had but one professor at the examiners' board, and now have only two, we claim the privilege which was granted to practitioners in a sister kingdom, and demand that we, who alone can render valuable assistance to these

professors, shall be permitted to do so; and that we and the public may have assurance that justice is done to the pupil, and, more particularly, that justice is done to the respectability of our art.

At Berlin, the professors are sufficiently numerous. There are three principal and three assistant teachers. The office of censorship is, however, guarded by a very peculiar provision. Certain medico-veterinarians, persons who have been educated and obtained diplomas as human and veterinary surgeons, assist at the examination of the students, and their meetings are at specific times, and public.

The natural consequence of these equitable and excellent arrangements is, that the veterinary surgeon abroad, although not bearing the rank of a commissioned officer, when in the army, is generally respected on account of his education and profession, and is employed to the exclusion of the empiric and the groom. He ranks far higher in the public estimation than does his insular brother, although, by some strange necromantic process, we are enabled in four, or five, or six short months, so to metamorphose the mercer, the tailor, and the cobbler, that his previous habits shall all be changed, his mind most gloriously illuminated, and he be rendered "fully qualified to practise the veterinary art in "all its branches."

This leads us to another argument. "Things have gone on "very well hitherto, but these veterinarians will overturn all our "fixed plans of proceeding, and introduce among us confusion "and discord."

Who has told these gentlemen that things are going on very well at present? Have they been grossly deceived, or do they deceive themselves? We will tell them that there is not a veterinary surgeon, of any respectability or eminence, who does not bitterly lament the degraded state of his profession. Nearly forty years have elapsed, and, except in the cavalry, he stands little higher in the public regard than he previously did. In what racing stable is he not a mere cipher, compared with the training groom? In what hunting establishment is he suffered to have a voice, if it be opposed to that of the huntsman, the groom, or the owner? In how few instances does the title of veterinary surgeon obtain admission to the presence of the no-

bleman, or the gentleman, unless it be the pleasure, or answer the purpose of the groom or the coachman, that he should be admitted? What town is there in which the uneducated farrier, or the practitioner without a diploma, does not rival, and frequently beat, the graduated veterinarian?

The practitioner of human medicine is admitted to friendly and almost equal intercourse with his noblest employer, while the *horse-doctor* is often left to shiver in the servants' hall, or is treated with peculiar kindness if he finds a place at the second table.

In some favoured situations, a few veterinarians, whose education, connexions, talents, and conduct, enforce respect, occupy that rank in life to which they are entitled; but, generally speaking, they are little distinguished from the farrier and the cow-leech: they are the outcasts of *good* society; and even the examiners themselves, in the expressive language of "One of the non-eligible," "disrelish the idea of having to take wine, or starch their manners or conversation, in their company."

We deeply feel all this in our diminished emoluments, our wounded pride, and our love of our profession; and, if a few veterinary surgeons were admitted to the examiners' board, some salutary reform would be speedily effected. The five-months' men would no more be heard of. Seductive, but useless, or mischievous theory, would no longer mislead and bewilder, but sound practical knowledge would be the only passport to veterinary distinction.

"Who is to have the appointment of these new members?" We reply by another question. Who fill up the present vacancies? The recommendation comes from the examiners, and that is subject to the confirmation of the general meeting. Are there any circumstances which forbid the same course of proceeding in the appointment of the new examiners? But "there are so "many claimants, and the appointment of a few, however im- "partial the selection, would give dissatisfaction to all the rest." Is not this the case in the majority of instances with every situation of emolument or honour? The claimants are usually numerous, and the unsuccessful are discontented. Was that ever considered to be a satisfactory reason why important and useful offices should

not be filled. Really the argument is unworthy of the distinguished person by whom it is said to have been used. It is too ridiculous for serious refutation.

"Veterinary surgeons are not agreed among themselves. There is considerable and disgraceful schism among them." This is not true. Never was any profession so united in the determination to effect an important purpose by honourable means. If there may be a few, and a very few, who are influenced by a zeal somewhat too fiery; or there may even be those whose object is destruction and not reform, surely there is no necessity that the interests of the profession should be placed at their mercy, or that they should be permitted to introduce discord into those councils in which unanimity has hitherto prevailed.

The veterinary surgeon is the person best qualified to decide on the competency of the veterinary pupil; and while human nature is true to itself, the well-informed and liberal veterinarian will be the warmest and the steadiest friend of the veterinary institution.

He is now excluded, because he is supposed to be incapable or treacherous, or not in that rank of society which would entitle him to associate with the human practitioner; or because he would attempt to reform certain things, which interest and prejudice have upheld, but which are inimical to the prosperity and respectability of his art.

He protests against this exclusion; and he will continue so to protest. He calls upon those who have placed themselves in the front of the battle, and have taken, or been made to appear to take upon themselves the whole odium of the transaction; he calls upon them to reconsider their opinion. His language will not be designedly offensive, but it will be necessarily expressive of his feelings.

If offence be taken by those whom he sincerely esteems, and to whom every veterinarian should be grateful, he will regret it; but an imperative duty to himself and his profession urge him to persist. A discerning public will decide between him and his opponents; and whatever inconvenience might for a short time attend certain threatened proceedings, the interests of the public

are too much identified with the progress of the veterinary art to permit it permanently to suffer. A new and better order of things would soon be established; the education of the pupil would be more adequate to the importance of the profession; and the English veterinarian would cease to blush in the presence of his continental brother.

Review.

Quid sit pulchrum, quid turpe, quid utile, quid non.—*Hor.*

A TREATISE ON INGUINAL HERNIÆ IN THE HORSE AND OTHER MONODACTYLES.

By GIRARD, *Director of the Royal Veterinary School at Alfort*, 4*to*, pp. 145, *with Lithographic Plates. Paris*, 1827.

(Continued from page 298.)

II.—OF ENTEROCELE IMMEDIATELY FOLLOWING CASTRATION.

This second species of hernia, which I shall call *the hernia of castration*, is commonly produced by the violent struggles of the animal during the operation, or in the act of rising, and is essentially similar in its effects to the one above described.

III.—OF CHRONIC ENTEROCELE.

This hernia, which owes its production to the dilatation of the vaginal sheath of the testicle, combined with the relaxation of the fibrous tissue surrounding the ring, is mostly at first intermittent, *i. e.* it disappears during repose, and returns under exercise or exertion; which variable condition lasts until such a descent takes place as renders the tumour, from its weight, incapable of yielding to the retraction of the surrounding parts: its augmentation then goes on until the accumulated matters within the gut produce obstruction, and that is followed by strangulation. These changes are not sudden; on the contrary, they proceed rather slowly, and accumulation and obstruction always precede strangulation. While the accumulation is going on, we observe loathing of food, dullness, indisposition to move: as the engorgement increases it is denoted by loss of appetite, constipation, borborygma, and cholic. Strangulation adds virulence to these symptoms, occasioning the most inordinate movements, and probably ends as in a recent hernia. Gangrene, at length, supervenes, succeeded by sudden cessation of pain, the too certain precursor of dissolution.

Practical observations show us, that old herniæ become strangulated from engorgement, and not from stricture of the neck of the sac at the ring: these can be considered but as secondary causes. And this explains why the symptoms of strangulation are in all cases essentially alike, varying only in the tardiness of their progress and succession.

It is to be observed here, however, that many subjects of hernia not only escape strangulation, but continue to do their work with a large hernial scrotum, and, to all appearances, without the slightest inconvenience, barring that which may arise from the weight and dependance of the tumour. It is a knowledge of this fact which leads us to warn the practitioner against surgical interference with these cases, unless symptoms of strangulation, or such as our author has here detailed, should render it absolutely necessary: under any circumstances, we apprehend, they are not cases "devoutly to be wished for."

It is not always easy to distinguish scrotal enterocele from other swellings of the genitals, and particularly when the hernia is complicated with sarcocele or varicocele, or thickening of the chord, or a combination of these. The tumour of an enterocele does not preserve a general uniformity; it is commonly most bulky next the abdomen, increasing from below upward; at times it is greatly diminished, and even occasionally shrinks into the natural volume of the scrotum. It yields to pressure, and returns to its form after being compressed: raise the tumour with the hand, and it sensibly diminishes in volume, in consequence of part of its contents withdrawing into the abdomen: a guggling noise sometimes attends this retraction. Should the exploration of the inguinal canal be deemed advisable, the opening will be found more or less dilated and encumbered, an unerring test of the presence of the disease.

In such a predicament as this, we shall recall to mind, with peculiar advantage, the expansion of the swelling under the influence of coughing, a test which we hesitate not to affirm would, in almost all cases, supersede the troublesome business of "exploring the inguinal canal."

In almost all chronic herniæ we meet with serous effusion, either into the cavity of the tunica vaginalis, or into the cellular membrane uniting the hernial coverings. Morbid thickening of these tunics is a much more rare occurrence, and one of which M. Girard has seen few examples.

IV.—CONGENITAL ENTEROCELE.

This last species, the most frequent but the least dangerous, is an attendant on birth, increasing up to the third or sixth month; afterwards diminishing, and ultimately vanishing. Should it continue, without loss of volume, beyond a year or eighteen months, it may be regarded as, and is, in fact, a chronic hernia. Should the tumour, however, instead of augmenting or remaining unaltered, diminish at intervals, and continue to do so more perceptibly, it will at length withdraw itself altogether, though it return again; until, the relapses growing less marked, and the intervals longer, the gut no more enters the ring.

Inguinal hernia commonly exists in the fœtus in utero. M. Linguenard, V. S., who has practised for twenty years in Normandy, where breeding is pursued on a very large scale, has ascertained, by a great number of observations, that this hernia is invariably present at birth, even in abortions and in subjects still born.

At whatever period congenital hernia may form, we include in this class all such as make their appearance a few days after birth, in which cases the gut becomes hernial in the same manner in which it does in others: it slips through the peritoneum at the ring, gets imprisoned within the inguinal canal, and either drags down the testicle along with it, or follows that organ in its descent; the testicle, in ordinary cases, descending prior to the sixth or seventh month.

At this stage of the inquiry we feel desirous to know whether the herniæ anterior to birth spring from the same causes as those in the grown-up subject, which are almost invariably ascribable to efforts of violence. Congenital herniæ appear to us to be the result of circumstances connected either with defective organization or a special irritation. In the only instance in which we have had an opportunity of investigating this part of our subject, we found the testicles in a state of atrophy, whitened, and imperfectly developed.

To whatever cause congenital hernia may be ascribable, we are not justified in seeking for one out of the ordinary course of events, since M. Languenard has found hernia "invariably present at birth." By "defective organization" we presume that our author means the incomplete formation of parts, and alludes more particularly to the ring and inguinal passages, which we know at this early season to be lax, and open to receive any small unconfined abdominal viscus. We would not attach any importance to the accidental circumstance of a shrunk atrophic testicle; and we must confess we are not able just now to unsolve the apparent mystery in which he has left part of this subject by the phrase "special irritation."

Certain movements of the full-grown fœtus appear very likely to produce hernia, when we see that the passages through which it has to pass *are so lax as even almost to invite it: the ring and inguinal canal appear to be both larger than in the adult, and evidently possess more extensibility.* The neighbouring parts, the fibrous aponeurosis of the abdomen, the lips of the external ring, the dartos and cremaster, being yet but imperfectly developed, have little power to oppose rupture. But as soon as the fœtus leaves the womb, these parts begin to acquire strength, and at length attain such a degree of energy as, by contraction, to re-act upon the incarcerated hernia, raise it upward, and ultimately force it back again into the abdominal cavity, and there retain it. These reflections on the development and disappearance of hernia at birth, serve to explain, also, why inguinal herniæ suffer no engorgement or strangulation until they arrive at the chronic stage. For, as the foal advances in age, the protruded mass becomes considerable; his food becomes more fibrous and substantial: thus every thing conspires against the spontaneous reduction of the gut; nay, even superinduces those consequences which result from its continuance.

In this and the preceding paragraph we have abundance of evidence from the author himself, that he attaches no weight either

to the "atrophic imperfectly developed testicles," or to the "special irritation;" but finds natural causes for natural effects. The passages are larger and more extensible; the parts disposed to protrude, the intestines, being in a state of inanity, are contracted, and consequently smaller: in other words, the containing parts, so far from offering resistance or obstacles to protrusion, rather invite it, while the contained parts are in a fitter state to take advantage of this, to which they may, perhaps (as Girard remarks), be in some degree urged by the movements of the fœtus in utero; and thus may rationally enough be explained M. Languenard's observation, "that congenital hernia is invariably present at birth," "even in abortions and in subjects still-born."

V.—OF EPIPLOCELE.

We have already shown that epiplocele is the frequent companion of enterocele, without adding to the importance of the case; and we have also explained, that epiplocele, of itself, was nowise dangerous; on the contrary, that it has occurred without any symptoms of pain or deranged functions: in fact, without intestine, the protruded omentum gives rise simply to a soft indolent tumour, confined to the groin, and unvarying in volume unless it receive additional contents; whilst enterocele diminishes and again enlarges by intermissions.

M. Roupp has assured me, that in the course of his castrations of cart horses he has on several occasions met with hernial omentum, which he has invariably amputated without any ill consequences.

Extracts from Journals, Foreign and Domestic.

ON AMAUROSIS, OR GUTTA SERENA, AS THE CONSEQUENCE OF STAGGERS.

NONE of our best veterinary writers mention a supposed and very probable sequela of staggers—amaurosis, or gutta serena, or palsy of the optic nerve. Mr. Percivall, speaking of amaurosis, says, that "it was referable, in every case which had come to his knowledge, to injury or disease of the brain." Mr. Blaine says, that "any irritation on the tubercula quadrigemina, or even pressure on them, which is liable to arise within the head from many causes, may occasion it;" but neither of them has traced it to the direct agency of, and sometimes appearing at a very distant

period after, that affection of the brain which we denominate staggers. Blaine, indeed, says that he never witnessed a successful issue of staggers; and Percivall does not relate any successful case. They cannot, therefore, speak of the sequelæ of a disease uniformly fatal. M. Berger Perriere, however, has published, in the Recueil de Médécine Vétérinaire for June 1828, several successful cases of staggers, and each of which was followed by amaurosis. The fortunate treatment of the disease, and its connexion with this affection of the eye, render his communication peculiarly interesting, and we shall give an abridged account of it.

In the autumn of 1809 he was at Bourgoin, in the department of L'Isère, where sympathetic staggers *(le vertige abdominal)* was very prevalent, and might almost be considered as an epizootic. He very satisfactorily accounts for this. The inhabitants of the neighbourhood of Bourgoin are very poor, and their horses are ill-fed. The poor animals are worked, without food, from an early period of the morning to night-fall, and are then turned into the meadow until ten or eleven o'clock. They are then led to the stable for a few hours' rest, and at three or four o'clock in the morning are again turned out, to pick up sufficient sustenance for the day: and this vicious system is pursued during every change of season, and however severe may be the labour exacted. It necessarily follows, that staggers will frequently be the result of a sudden and over-distention of a stomach for many hours empty, and its powers exhausted. The disease is there called the hoar-frost colic, because it is most frequent when the grass is covered with hoar-frost. It oftenest appears in the horse, ass, and mule, and occasionally in the ox. In the latter animal the treatment is most successful. The medicines employed are the same as for the horse, but the doses are larger.

On November 18th Mr. B. P. visited two horses that had been ill two days. They were dull; the head resting against the manger, the respirations low and deep, the pulse small and concentrated, the hair staring. He gave to each an ounce of soccotrine aloes and ten grains of emetic tartar in a pound of honey, and three purgative injections during the day, and a pail of *white* water in which four ounces of Epsom salts were dissolved.

On the 19th one of them purged copiously. The enemas were repeated, and the white water with the Epsom salts.

On the four following days extract of juniper and gentian powder were given with the Epsom salts as before. On the 26th he was nearly well, but in two months he became blind.

On the other horse the aloes had no effect. The dose was repeated on the 19th, and the animal died on the 20th.

In the beginning of January M. B. P. was requested to examine a horse whose sight had been apparently affected for some days. He was evidently labouring under amaurosis, and was completely blind. The owner then acknowledged, that in the preceding ten years, twelve of his horses had been affected with staggers. Eight had died, and three of those who survived had become blind.

On the 25th of November he was consulted respecting another horse. The treatment adopted was the same, but the animal died in two days. Its owner had two other horses in the stable, one of which had gutta serena after the hoar-frost colic.

On December 1st he saw a mare afflicted with the same complaint. The aloes, emetic tartar, injections, and solution of Epsom salts, were administered, and the animal recovered; but at the expiration of two months inflammation of the eyes appeared, which terminated in amaurosis.

On March 1st, 1816, being near Havre, he was consulted respecting a horse with sympathetic staggers. The same means were adopted: the horse rapidly recovered.

On the 30th it was observed that he lifted his fore feet higher than usual, that the slightest noise frightened him, and that his ears were in perpetual motion. On careful examination it was ascertained that he was perfectly blind in the right eye, and could see very little with the left. He was sold, and nine months afterwards Mr. B. P. had an opportunity of examining him. Amaurosis was complete in the right, but the left eye was merely sensible to the distinction between light and darkness.

On October 15th, 1827, he visited a mare with sympathetic staggers. The same means were adopted. On the 18th she lay down, and was not able to, or would not, rise. Injections were diligently used, emetic tartar with honey daily given, and in all her water Epsom salts were dissolved.

On the 27th she was, with considerable difficulty, got on her legs; but it was not until the following January that she had perfectly recovered her strength. It was then observed that the pupils of her eyes were unnaturally dilated, and although she did not become blind, her vision was evidently affected.

M. Berger, at the conclusion, appeals to the experience of his brethren, and we would appeal to experience of our's, and entreat their communication of that experience, whether there be this frequent connexion between staggers and partial or total blindness.

M. Bouley, in the Journ. de Méd. Vét. Dec. 1824, relates a

case of this, and the only one that had occurred in his practice. M. Girard fils relates a similar case.

We have frequently seen amaurosis the consequence of epilepsy in the dog, and it has then been uniformly incurable.

It is a new subject, and we solicit the attention of our correspondents to it.

A NEW MODE OF FIRING FOR SPLENTS AND OTHER EXOSTOSES.

BLISTERS are often insufficient to remove bony enlargements, and, by destroying the hair, they sometimes produce a temporary or even permanent blemish. The traces left by the actual cautery are generally indelible.

M. Dutiosne first proposed a method of cauterization more severe and effectual than the blister, and never blemishing; and it has very lately been warmly advocated by M. Gellé, assistant professor at the veterinary school at Alfort. It is contained in the Recueil de Méd. Vét. for July, 1828.

He shaves the hair closely round the splent or windgall, and daily well rubs in a little strong mercurial ointment. He then takes a piece of the skin of a pig, tolerably thick, and either in its fresh state or formed into bacon, a little larger than the tumour, and with a thin layer of fat attached to it. He places this over the tumour, with the fatty side towards it, and then draws over it a firing iron, of a dull red heat, and presenting a flat surface of the size of an almond. The iron is lightly drawn over the hog's skin, in a waving circular manner; and when one iron is cooled, a few minutes are suffered to elapse before another is applied. The operation is continued until the hog's skin is shrivelled up, and nearly destroyed, care being taken that it is neither torn nor pierced by the iron; and this process will occupy more than half an hour. The part beneath will now be exceedingly hot and tender, but not burned; a slight swelling will ensue, sometimes accompanied by serous exudation. In a few days the cuticle will peel off, and, generally, without any of the hair being removed; and not a trace of the operation will be left at the expiration of a few weeks.

M. Gellé thinks that the hog's fat penetrates through the integument of the horse into the tumour, carrying with it the caloric which it has derived from the heated iron; and therefore he recommends very light applications of the cautery, and a short interval between each, that the grease may penetrate gently and insen-

sibly with the caloric it has received. This, however, is very doubtful. The rational explanation of the process is, that through the medium of the fat lining of the hog's skin we are enabled to apply to the tumour a very high degree of heat, three times greater than that of boiling water, although not half so much as that of red-hot iron, and sufficient to stimulate the neighbouring absorbents to energetic action, without destroying the cutis to which the hair is attached.

M. Gellé terms this operation, and not inappropriately, "Me diate Cauterization."

INVERSION AND RUPTURE OF THE WOMB OF A COW SUCCESSFULLY TREATED.

By M. Saussol, *Veterinary Surgeon to the* 18*th Chasseurs.*

A COW, four years old, begun, half an hour after calving, to tremble, look round at her belly, low continually, butt with her horns, lie down and rise up again immediately, and make violent efforts apparently to urine. The womb was suddenly inverted, and a rent, a foot in length, was found in the middle of its inferior part. The cow becoming more furious, one person mounted on her back to keep her down, another drew her tongue from her mouth, and a third pricked her with a goad as often as she attempted to struggle. Two other assistants held up the enormous mass of the protruded uterus, while M. S. attempted the reduction, which he accomplished in less than ten minutes. He then kept his arm in the vagina, while an assistant passed a girth round the animal's body. A long roller was attached to this girth under the belly; it was passed between the fore legs, and being slit at the point of the chest, one part was brought up on each side of the neck, and fastened to the girth above. Another roller was then fixed to the girth underneath, brought along the belly, between the hind legs, and over the vulva and anus, and there, being slit, a division passed on either side of the tail, was carried along the back, and fastened to the girth above. The cow was then suffered to lie down, and a considerable quantity of hay was put under her hind extremities, somewhat to elevate them. She was then bled, and cooling drinks were administered.

Her pains continued during the night, with the same violent efforts, but the bandage afforded an effectual support, and the protrusion did not return.

Towards the morning she was easy. The bandage was re-

moved in the course of the day. She suckled her calf, and produced another eighteen months afterwards.

In another case, of inversion of the uterus, and where, from the violence of an ignorant servant, considerable laceration had taken place, M. S., having returned the part, instead of using the bandage, passed two stitches through the lips of the vulva. In eight days the animal was well.

Rec. de Méd. Vét. Juillet, 1828.

INTROSUSCEPTION OF THE SMALL INTESTINE IN THE HORSE,

WITH ENORMOUS DISTENSION OF THE STOMACH, AND VOMITING BY THE NOSE AND MOUTH.

By M. RENAULT.

M. RENAULT, in the Recueil de Méd. Vét. Juillet, 1828, relates a very singular case, which we shall abridge. A carriage horse had fallen in the shafts on the preceding evening, and after that had several slight attacks of colic. On the following morning he fed as usual, drank a large quantity of cold water, and commenced his daily journey. He worked more freely than he was accustomed to do, but his respiration became laborious, and the carriage halted two or three times that he might take breath.

No sooner did he enter the stable than he lay down, rolled over and over, a profuse sweat covered him, and his countenance was anxious and expressive of extreme pain.

At 2 P. M. M. R. saw him, and considering it to be an attack of acute inflammation rather than colic, prepared to bleed him. To this the proprietor superstitiously and peremptorily objected; and the usual medicines and clysters were administered. The horse became hourly worse. His extremities, and even his body, grew cold; the force of the pulse was sensibly diminished, but the heart beat with increasing power.

At 9 P. M., after some violent efforts, he discharged from the nostrils a quart of thin green fluid, of a penetrating herbaceous smell, and holding in suspension a few particles of half-digested food. All expression of pain had ceased; the body was covered with perspiration, and the limbs were icy cold. The vomiting continued at short intervals, sometimes from the nostril, at other times from the mouth, until more than fifteen quarts of this green pungent liquid were discharged. The pulse could scarcely be felt, but the heart beat with greater violence, shaking the whole of the

frame at each contraction. At length the beating of the heart became weaker, and at 10 A. M. on the following day the animal died.

Two hours after death the body was opened. The arch of the colon and the point of the cæcum were displaced, and thrust to the right by the distended stomach, which was treble its natural size, and contained twenty-one quarts of fluid similar to that which had been discharged by vomiting. Its interior presented nothing remarkable except the obliteration of the rugæ in the large extremity, and the flaccidity of the muscular membrane at the cardiac orifice. At the distance of two feet from the stomach was an introsusception *(invagination)* of the small intestine. Fourteen inches of the gut were taken up in a direction towards the large intestines, and the mesentery was torn. The mucous membrane of this portion of the bowels presented the most intense inflammation, and, in several patches, gangrene had succeeded to inflammation. The whole of the ilium, and even the colon and cæcum, displayed considerable inflammation. The heart had several large spots of ecchymosis on the serous membrane of the left ventricle. The velum palati was perfect, although the horse had vomited through the mouth.

M. R. remarks, that introsusception in the horse is, probably, of more frequent occurrence than we are aware; and that it was here evidently the consequence, and not the cause of inflammation or spasm. It did not exist on the preceding morning, for only a very small portion of the food which the horse had taken was found in the stomach. It had passed into the large intestines, and even through them, and had been evacuated. What hindered the passage of the water? After the early part of the preceding morning no fluid had been received into the stomach except two medicinal drinks. Was it that the pyloric orifice permitted the escape of the partly-digested food, but opposed itself to the cold and crude water? We know that it has the power of selection. After a while did the presence of this cold body produce spasmodic contraction of the pylorus? and was this tendency to spasm rapidly propagated, and an inverted action produced in the neighbouring intestine, already, probably, in an irritable and inflamed state?

M. Renault confesses that he is unable to decide the question; nor do we, who are performing the humble offices of translation and abridgment, feel disposed to enter into it. The valuable memoir of M. Renault cannot fail, however, of supplying matter for much reflection. The invagination, connected with the presence of this enormous quantity of cold water, and with general mucous inflammation; the passage of the food, and the retention of the wa-

ter previous to that invagination; the strange distension of the stomach, treble its natural size, and having contained no less than nine gallons of fluid, and that without rupture; the frequent vomiting by the mouth as well as the nose; these are very remarkable circumstances, and we are much indebted to M. Renault for the history of the case.

COMPLETE INVERSION OF THE BLADDER IN A MARE.

By M. GAULLOT, V.S. *at Bar-sur-Aube.*

(Recueil de Méd. Vét. Mai.)

A MARE, aged three years, miscarried in the 8th month of utero-gestation. The foal was found behind her, and a membranous pouch protruded from the vulva. The owner believed it to be a portion of the womb, and endeavoured to return it, but being unable to accomplish his object, M. Gaullot was called in.

The protruded body, from being roughly handled, had become highly inflamed, and was considerably increased in bulk; and the membranes that covered it were become so thickened and hard that it was scarcely possible to imagine any cavity could exist within it.

M. G. following its apparent pedicle, could only trace it to the middle of the inferior portion of the vagina, and the orifice of the urethra he could not by possibility discover. He therefore began to suspect that the protruded body was the bladder, which, in the throes of parturition, had been forced through the meatus urinarius, and inverted.

After careful examination he discovered the orifices of the ureters, and on lifting with a scalpel the membranous folds which covered them, the urine began to flow. He excised these folds, and the urine regularly passed, except that, from the elasticity of the ureters, the fluid, when the animal was walked or trotted, was ejected to the distance of five or six feet.

The thickening of the bladder rendered it impossible to return it to its proper situation, although this might perhaps have been accomplished with safety before the inflammation and swelling had taken place; and M. G. recommended that she should be destroyed. The proprietor would not consent to this. The mare was bled, her allowance of corn stopped, mashes given, and fomentations used.

Some time after (M. G. does not say how long) he was reques -

ed again to visit her. The bladder was now insensible to pressure, diminished in size, and a brown colour had succeeded to the inflammatory redness. The ureters continued to discharge the water in jets, less strong and more frequent, and evidently furnished as much urine as the bladder would have done in its natural state.

M. G. again recommended that she should be destroyed. "I will not consent to that yet," replied the owner; "but you must cut off this protrusion." It was in vain to remonstrate. The bistoury and hot iron were resorted to, and the bladder was amputated, not at its neck, but an inch below the insertion of the ureters, and still leaving one-third of it protruding. Very little hæmorrhage followed. No inflammation supervened; and in a few days the part which remained had very considerably diminished. It scarcely projected from the vulva. The ureters no longer expelled the urine by jets, but in an almost continuous manner. In process of time the remains of the bladder diminished to the size of a nut, and were concealed within the vagina. The urine was now discharged in the vagina; and flowing to the anterior part, there formed a kind of dilatation or reservoir, which could contain the urine excreted for four hours during rest, and for one hour while the animal was at work. When the mare wished to urine, or or to empty this reservoir, she placed herself in the same attitude which she had previously been accustomed to assume; but the urine, instead of being rapidly evacuated, ran slowly over the thighs and legs, and produced loss of hair and much soreness and erosion.

The owner worked her four years after this, and then sold her; and M. G. was afterwards unable to trace her.

No English writer gives any account of this singular inversion, nor has it fallen within our experience or knowledge. M. Gaullot's memoir, therefore, will be interesting to our veterinarians.

Considering the bulk of the bladder, and its attachment to the pelvis and the vagina, by cellular substance and by the ligaments, or, more properly, duplicatures of the peritoneum, and by the urochus at its fundus, we should have thought it impossible that this viscus could descend through the female urethra, even short, and straight, and dilateable as it is. The inversion can only be effected during the violent throes of a most laborious parturition.

Since, however, the bladder may, although very rarely, be in-

verted, it may be distinguished from inversion of the uterus by its smaller bulk, by the hand passing into the vagina, and by the cervix or pedicle being traced to the meatus; and from a polypus, by its villous coat, and by the discharge from the ureters.

M. Gaullot laments that he had not been earlier called in, since he might then have probably returned the viscus to its natural situation. We very much doubt the possibility of this replacement. The violent efforts of parturition could alone accomplish the inversion, and that, when the urethra, with all the neighbouring parts, was disposed to dilate. The labour being ended, the meatus urinarius, irritated by the presence of a foreign body, will begin immediately and powerfully to contract; and small as its calibre naturally was, it will now be lessened or obliterated by the neck of the bladder, which occupies and distends it. There is no way in which it can be got at, to be dilated; and the immense pressure necessary to force the bladder back, and applied against the villous irritable coat, would produce extreme and even fatal inflammation and injury.

Our advice would be that given by M. G. "let her be destroyed;" or, if we were compelled to operate, we should precisely follow his scientific method; assured, however, that our poor patient must ever be a nuisance to herself and a disgusting object to her owner.

THE following curious account of the *knacker's* business is extracted from the Tocsin, p. 77:—

The daily consumption of horses in London is about 46, or more than 14,000 in the year. The skin of the dead horse is worth 9s.; bones, 10s.; flesh, 12s. per cwt.; fat, 25s. per cwt., to make soap; hoofs, 6s. per hundred, to make Prussian blue, sailors' buttons, and snuff boxes; hair, tail, and mane, 9d. per lb.; shoes, 10s. per cwt.; and marrow, 1s. per lb., and which is much used by poor people as a remedy for the rheumatism.

EXTRA-UTERINE GESTATION IN A SHEEP.

By M. Sausol, *V. S.* 18*th Chasseurs.*

A EWE of three years old had taken the ram with the others. About two months afterwards the shepherd perceived a small tumour, of the size of a nut, about an inch behind the navel. In five or six months it had become as large as a goose's egg. M. S. then saw it. It had the appearance of an abscess. He lanced it. A quantity of purulent matter flowed from it, and in this matter the bones of a fœtus. They were separated from each other, and of a black colour. The head was entire, and not larger than a filbert.

M. Saussol then laid the animal on its back, enlarged the incision, and very carefully examined this artificial uterus. The abdominal muscles were twice their usual thickness, and formed a pouch in which the fœtus was lodged. Not the slightest communication with the abdominal cavity could be detected. The wound was healed in fifteen days. The ewe had not at any time appeared to suffer from the formation of this abscess; but after the operation its health declined, and it was sold.

Rec. de Méd. Vét. Juillet 1828.

ELECTRICITY OF THE BLOOD.

M. BELLINGERI *(Annali Univers di Med. April* 1827*)*, has discovered that the venous blood in oxen and sheep, has, in health, a degree of electricity equal to that of iron. Exercise, the seasons of the year, or the different conditions of the atmosphere, have little influence on this electricity; but that age diminishes it in a small degree, and that it is likewise diminished in inflammatory diseases.

The venous blood of horses and dogs does not contain so much electricity, and resembles that of antimony.

Arterial blood contains a rather smaller proportion of electricity, and is likewise a bad conductor of electricity.

Both arterial and venous blood retain the same quantity of electricity after they have been drawn from the vessels, and the serum and cruor separated.

THE

VETERINARIAN.

VOL. I. NOVEMBER, 1828. No. 11.

Communications and Cases.

Quidquid agunt *Veterinarii*
——— nostri est farrago libelli.

FISTULOUS PAROTID DUCT.

By W. PERCIVALL, *Esq. V. S. First Life Guards.*

[Read at the meeting of the Veterinary Medical Society, Oct. 15, 1828.]

"FISTULOUS PAROTID DUCT" forms one division only of an important class of surgical diseases named "SALIVARY FISTULÆ." It would be wasting time to search our works on farriery for any information about what appears only of late days to have attracted the attention of veterinarians in this country. Even our most modern veterinary writers evince a singular dearth in regard to it. It is to the French authors (who, it would seem, either actually see, or seeing, observe more than we do) that we are almost solely indebted; and in particular to Hurtrel d'Arboval, who (in his "*Veterinary Medical and Surgical Dictionary*") appears not merely to have collected much information on the subject from various sources, but from personal practice and observation to have added considerably to it himself.

By a SALIVARY FISTULA is meant, an unnatural sinuous opening, communicating either with a salivary gland or with its duct, and through which issues more or less of the salivary secretion. The parotid is the common subject of this breach; but the maxillary gland has been similarly affected. The former is our present object of investigation.

The fistula, externally, will assume various appearances, dependent on its origin or cause, its situation, its duration, and the

actual condition of the parts. Should it arise from local abscess, it will present an exulceration more or less deep and irregular; on the other hand, should it be the effect of a punctured wound, it will appear a smooth, clear, circular aperture. If in the duct, as it ascends upon the side of the cheek, the aperture becomes so contracted that even in some cases a pin can hardly be introduced into it: if in a dependent situation, opposite to the angle of the jaw, it preserves a larger calibre. At first the aperture will be ulcerous and irregular, it then grows circular and smooth, and at length its edges obtain a covering from an inversion of the skin—a cuticular border, which gives it the appearance of a natural outlet: in time, this border thickens, and grows hard and callous. From inflammation the border will become red and tumid; otherwise it rises but little beyond the level of the surrounding skin.

The discharge of saliva from the fistula is neither constant nor uniform. Commonly, the secretion accumulates in the duct, and suddenly bursts forth from the fistulous orifice, in consequence of the motion of the jaws. These emissions are observable during mastication; and are more particularly remarkable at the time the horse makes his first meal in the morning, after a long interval of maxillary inactivity. At first the fluid is poured out in a full stream, so that I have collected between two and three drams of saliva per minute: after a time, however, the stream degenerates into droppings, until at length the discharge ceases altogether. But, let me add here, all that I have said about the discharge of the fluid will be greatly influenced by the situation of the fistulous aperture: whether it is in the duct or in the gland, or be dependent or not.

Concerning the fluid itself, what I have collected in these cases has been aqueous, limpid, saline; in fact, has in general appearance resembled common water, possessing the ordinary properties of saliva. I can easily imagine, however, that in certain cases it undergoes alteration or decomposition, and gives rise, as Hurtrel d'Arboval tells us it does, to "a viscous and slightly purulent discharge, having a strong, penetrating, infected odour."

What changes the gland may undergo, or whether it undergoes any organic alteration, in these cases, I am not prepared to answer: all that I can advance on this point from my own experience is, that whenever any obstruction has been long in force to the flow of the saliva, the gland becomes exceedingly tumid and tender on pressure, resuming however its natural appearance as soon as it becomes relieved from the distension. Not so, however, with the *duct:* the main conduit, and even its ramifications within the substance of the gland, invariably become greatly distended in their calibre when they have been subjected to excessive

or long-continued accumulation of the secretion; indeed, so remarkable is this alteration, that in some cases the duct no longer resembles the original formation. I remember operating in a case of this description, in which I became quite confounded after the parts were exposed by incision, owing to mistaking the parotid duct (whose natural volume is that of a large goose-quill) for the sub-maxillary vein: the excretory tube, when opened, to my surprise, admitted the introduction of my fore finger. In addition to this, the tunics of the duct lose their pellucidity and shiny exterior, and become opaque and thick, and even indurated; in which state their contractility is either greatly diminished or altogether destroyed.

The causes of salivary fistula admit of classification into *natural* and *artificial*. Those I denominate "natural" which operate through the medium of the constitution. For example, abscess or suppuration of the parotid gland, whether it be a concomitant of strangles or catarrh, or a distinct affection by itself; but, should it originate in wound or contusion, I would say (for distinction's sake) that it had an *artificial* origin. We all know that parotiditis occasionally makes its appearance in horses, not only in a symptomatic or collateral form, but also as an idiopathic disease; and we are also aware that the parotid is a part by no means unlikely to be injured, both on account of its exposed situation, and from the frequent use that is made of scissars in particular in trimming the ears. I need not enter into any account of the malady vulgarly called "the vives:" its name is sufficiently indicative of what I mean. Hurtrel d'Arboval informs us, that for this disease in France, "the ignorant farriers and cow-leeches are in the practice of pinching, bruising, and lacerating the parotids; and that phlegmonous inflammation, abscess, and fistula, are in some cases the consequences of such an absurd and barbarous proceeding."

In one of the cases selected from my own practice, the fistula was the result or rather the concomitant of strangles; in another, the cause (though unknown to me) had to every appearance been a punctured wound. In a case related by Hurtrel d'Arboval, it originated in the excision of the sub-maxillary lymphatic glands.

Treatment.—The case may be regarded as calling for measures, simple, complicated, or even hazardous, depending on the situation of the fistula, its duration, or some unforeseen incidental circumstance. Should the breach be recent, every measure likely to produce adhesion of the divided or separated parts is to be speedily resorted to; such as approximation of them by plaisters, bandages, or sutures, and quietude of the jaws; to which may

be added, attempts to diminish the secretion of the affected gland, or to restrain its current.

Plaisters will be found to be made to adhere with difficulty, not merely on account of the known inaptitude of the hairy skin of the horse for any such application, but also from the issue of moisture underneath them, which completely destroys their adhesive properties.—*Sutures* could only prove serviceable in a recent case of open incised wound.—*Bandages* may be made to operate beneficially in more ways than one. 1st. They may be so applied as to retain a firm compress upon the fistulous aperture. 2dly. They may be so adjusted as to impede or prevent the motion of the jaw; though, probably, this is best accomplished by tightening the nose-band of the head-collar. 3dly. They may also be made to confine a compress or pad against the affected parotid gland, which is likely and has seemed to have had the effect of diminishing the secretion, as well as of restraining its current. I shall not dwell, however, on these means; because, simple as they appear to be, they will be found to be troublesome in practice, and because (although I consider it my duty to notice them) they are, in truth, much better adapted for human than veterinary surgery. Not that the horse's skin (as has been erroneously stated) is insusceptible of union by the first intention; but that, from the difficulty we experience in retaining divided parts in apposition, we rarely practise this branch of surgery with great success.

In the repair of these breaches, the process of granulation appears to be that most congenial to nature, and consequently the one it is most particularly our interest to keep in view. In cases in which the fistula is the result of destruction of substance, from abscess or sloughing, all becomes restored again by the granulatory process consequent thereon: the salivary canals ulcerate in common with other parts, and with them have their integrity renewed. No special treatment, in this instance, is required. But supposing that the salivary tube remains unclosed after the chasms around it are filled up, or (what amounts to the same thing) supposing it to be a case in which our attempts at union by the first intention have failed, what ought to be our plan of procedure?

Why, still keeping in view the resources of nature, if we cannot invite union in one way, if we find the parts of themselves indisposed to heal up, we must endeavour to excite a sanative action in them by artificial means, so as to effect union by the process of granulation. Stimulants, escharotics, caustics of various kinds and intensities, either in a fluid or

solid form, may be applied to the fistulous opening, with a view of producing granulation; but, I believe, they are all, either separate or combined, inferior to the *actual cautery*. Indeed, I feel myself warranted in asserting, that the majority of these cases have owed their cure to the application of a red-hot iron. It is a remedy which seems, naturally as it were, to have suggested itself to the common farrier, to "sear up" the opening, and one that is found by experience to be peculiarly well adapted for the case before us. In the first place, by its melting and agglutinating effects, it forms an eschar, or sort of plug, over the fistulous orifice, which serves as a temporary stoppage to the efflux of the secretion; and in the next place, it casts off a slough from the part, which leaves a surface the best disposed of all others to throw up granulations: in fact, nothing, I repeat, that I know, is so likely to promote fresh and healthy action, and particularly when parts have grown inactive or callous from continued disorder, as the cautery. The iron commonly employed is the one denominated "the budding iron." The chief object is to adapt it to the dimensions of the sore; and often advantage will be derived from introducing it, for some short distance, into the fistula: it should be applied at a dull red heat, and repeated as often as the inflammatory action subsides without being attended with the desired effects. This, then, forms the mode of cure by granulation.

But, it occasionally happens that we are foiled in closing the fistulous aperture, in consequence of obstruction existing at the natural outlet of the salivary canal; at least, this was the case in the instance of a horse of my own, in whom the parotid duct discharged itself through an opening on the outside of the cheek, which we failed in healing up in consequence, as it afterwards appeared, of the closure of the natural termination of the duct. What course is to be adopted in this instance?

Conceiving this to be the nature of the case just alluded to, and it appearing to me, as such, as rather an awkward affair to manage, I consulted human surgery on the subject, and I found (I think at the suggestion of Munro), that in cases of established salivary fistulæ, the common practice was, to pass a seton from the external fistulous opening through the cheek into the mouth, retaining it there until the internal as well as the external orifice, had become fistulous; and, finally, healing up the latter by the application of caustic—the argentum nitratum. No one could deny that this was sound pathological reasoning, and as such, I must confess, it appeared to me very feasible: I found it widely different, however, when I came to apply it to veterinary practice. It proved to be one of those anomalies which would have speedily

hurried the surgeon out of the stable, not so well satisfied with himself as our examiners appear to be, for having, unqualified, applied his knowledge of surgery in man to practice on the horse. There was not the least difficulty in boring a hole through the cheek; but there was considerable difficulty in forming the seton therein, and afterwards securing it.

The mode of proceeding I found the most convenient was this: Having made an opening through the cheek, continuous with the fistulous one, I passed a piece of round tape through it into the mouth, where, by the aid of a balling-iron and a pair of long bullet-forceps, I seized hold of the end of it. Now, I found it quite useless to make a seton with knots in the common way, for shortly after the knot on the inner side was made and drawn into its place, the animal with his grinders bit it off, and thus defeated my purpose: the only contrivance, after repeated trials, I found effectual, was the attachment of a flat metallic button, without a shank, to the inner end of the tape, which being confined close to the side of the cheek by a knot on the outside, completely frustrated the horse's efforts to catch it between his teeth. In this manner may a seton be easily passed and retained in such a situation; but I cannot say that my experience augurs favourably of the experiment. The object in view, as I said before, is to establish a fistulous opening internally, and afterwards close the external one by escharotic dressings, or, if it seem meet, the application of the cautery again.

Should we not by any of these, or other means, succeed in closing the fistulous orifice, and diverting the course of the spittle into its proper channels, it becomes a question, what more can be done with the intention of remedying so unpleasant a disorder. In this stage of our proceeding, it probably strikes some one present (if it has not done so before), that it would be an easy matter to suppress the issue at once by putting a ligature around the parotid duct; an operation that could present no difficulty. Unquestionably, as far as regards the operation, our course is clear enough; but, in the event of the parotid duct being obstructed, what is to become of the secretion? Why, I will tell you. It will collect and accumulate in the duct until such a degree of distention takes place that the vessel ruptures, and ruptures at the very part around which the ligature is put: at least this was the result in a case I shall presently have the pleasure of reading to the Society. It appears, however, that this is not the uniform effect: Hurtrel d'Arboval practised the same experiment in a similar case, and the effect was considerable inflammation and tumefaction of the gland, followed by a large abscess in the very centre of its substance, out of the chasm occasioned by the discharge of which

issued afresh the saliva in as copious a stream as it did from the duct before the performance of the operation. Such are our expectations from tying the duct.

Foiled in every known means to subdue a fistula of the parotid gland itself, Hurtrel d'Arboval tells us that he conceived the idea (certainly a singular one) of paralysing the gland, of depriving it of vitality, or at least render it incapable of any secretory action. This he proposed to effect by compression, so contrived that the gland might be in a manner isolated, its communication with the surrounding parts being (by means of irons adjusted so as to press all round it) more or less intercepted. The animal, after the apparatus was all adjusted, manifested some nervous irritation, but it soon subsided. The temperature of the gland included within the apparatus became greatly diminished, and the issue of saliva completely arrested: the upper portion of the gland, on the contrary, swelled, and threatened the formation of fresh abscesses; in addition to which, the ligatures soon began to cause ulceration of the skin, and, in fine, produce so much mischief, that the experiment, at the end of fifteen days, was abandoned.

A cure was afterwards effected, however, by actual cauterization. The iron used was of extraordinary dimensions, and it was applied at a white heat to the whole surface of the gland, so as to destroy the parts to a considerable depth; and no sooner was one eschar detached, than the surface was cauterized afresh with the same severity, until a slough was thrown off, from the depth even of the blood-vessels underneath the gland: in this manner, I repeat, Hurtrel d'Arboval eventually established a cure.

There is, however, a method of cure in these untoward cases, no less simple than effectual, and not the less, I trust, deserving consideration because (as far as my observation has gone) this is the first occasion on which it has received publicity. As yet the experiment rests on the success of two cases, of such a decided character that I feel I can, with more than ordinary confidence, place my remedy in the hands of the members of this Society.

The *principle* on which I proceeded was similar to that which has, since my experiments, been attempted to be put into practice by Hurtrel d'Arboval, but, as we have seen, unsuccessfully. His operation consisted in paralysing the action of the gland by intercepting its supplies of blood, or nervous influence, or both. What I recommend, is the destruction of the glandular mechanism—the annihilation of the secretory power; which, I conceive, considering there are three salivary glands, and these three in pairs (not to take into our account the pancreas), may be done without materially affecting the animal economy.

In June, 1826, a young brown horse was admitted into the

Royal Horse Infirmary at Woolwich for strangles. Suppuration taking place between the branches of the jaw, his throat was lanced in the ordinary manner, and in two places, giving issue to a very considerable collection of healthy-looking pus. Four days afterwards, saliva, mingled with pus, issued from both the openings, one of which was opposite to the place where the parotid duct crosses the border of the lower jaw; from which circumstance it was supposed the duct must have been wounded by the lancet; although it was remarked, that the distention was such as, apparently, to have rendered it very improbable. Albeit, the application of the actual cautery, followed up by some astringent injections, arrested the salivary emissions; and the animal went out of the Infirmary, to grass, at the end of three weeks from his admission, "discharged, cured."

In August following he returned into the Infirmary with fistulous parotid ducts, but in quite a different situation from the punctures originally made by the lancet. The apertures now (also two in number) were situated upon the parotid gland itself: one, which admitted my little finger, opened under the root of the ear; the other opened midway between the angle of the inferior maxilla and the transverse process of the atlas. Although there was a subcutaneous sinus running from the upper, it did not conduct the probe down to the lower: fluid, however, injected, found its way out below. Pus and saliva together ran from the upper opening: the lower one discharged pure saliva, which, trickling down the neck, kept the hair constantly wet. The actual cautery was applied to both orifices; into the upper one was also injected a weak solution of sulphate of copper, on the third day afterwards. At the expiration of the week the iron was again used, the wounds looking healthy, and being nearly closed up; and the next day the horse was again sent out to grass.

In September (three weeks from the date of his second discharge) he was once more brought to the Infirmary for the same disorder. There was now but one opening, and that the lower one, which, according to the man's account who brought him, had been "running" ever since he has been at grass. The issue consisted of both pus and saliva; but the latter was greatly predominant. On close examination, it was evident that a principal (if not the main) branch of the duct opened opposite the orifice, and poured forth all its secretion. What was now to be done? The cautery and astringent injections had failed: the fistulous passage had become established. At first, I contemplated the extirpation of the gland; but when I came to consider what difficulties I had to overcome, what hazards to encounter, and what time the process of subsequent granulation to fill up such a chasm must ne-

cessarily occupy, I felt averse, I must confess, to make the experiment. It was in this state of perplexity that the following alternative suggested itself: I made a mixture of argent. nitrat. ʒfs., acid. nitric. ʒj., aquæ pur. ʒj., and injected this into the fistulous opening, in the direction of the duct leading to it. At the same time I administered in ball six drams of aloes. Four hours afterwards the glandular parts were considerably tumefied, and very susceptible of the pressure of the finger.

2*d Day*.—The swelling has spread a little way down the neck, and the tenderness is extreme. No discharge. He purged after exercise.

3*d Day*.—Tumefaction diminished. Discharge of saliva returned.

6*th Day*.—The tumour has been daily growing less. The discharge continues in diminished quantity, and is now again mingled with saliva. Caustic injection repeated.

7*th Day*.—But little augmentation of the swelling. No issue from the hole.

14*th Day*.—Nothing has been done since. The swelling is diminishing, but very slowly: the discharge continues, but much reduced both in stream and quantity.

17*th Day*.—The swelling has considerably subsided. The gland, not very much augmented beyond its natural volume, has a hard schirrous feel, and has lost almost all its acquired sensibility. Very little saliva has appeared within the last twenty-four hours.

22*d Day*.—The discharge has, for these two days past, ceased altogether. The fistulous orifice is (permanently to all appearance) closed up: its situation, however, seems likely to remain well marked by an indentation and sort of puckered contraction of the integument. The gland is but little more prominent than its fellow; it has a solid, firm, indurated feel; and the animal bears pressure upon it with impunity. In this state, the horse was discharged; and from this time remained free from the disorder.

The case I am now going to relate was attended with a different result, and one which, I must acknowledge, surprised and even alarmed me; at the same time, it has turned out to be one by which, I trust, additional light will be cast on the subject before us.

In May, 1826, a long switch-tail bay horse, five years old, in very fat condition, was sent to my father, to be treated for fistulous parotid duct. The fistulous orifice was situated upon the side of the cheek, directly opposite to the place where the duct pierces the bursal membrane, to open into the mouth. The opening ap-

peared very small; its border was circular and smooth, and was red or pinkish, from having no cuticular covering. Pure saliva was emitted from it, which, from trickling down the cheek, wetted the hair, and in places excoriated the part. The issue was not constant: eruptions commonly took place twice in the course of the day—at eleven o'clock in the forenoon, and four in the afternoon, at which hours he was fed with corn; which, in consequence of its requiring greater mastication than other provender, would produce more copious emissions. At first, the fluid spirted out in a fine stream for the distance of three or four yards from the head, bespattering the side of the stall; at which time from two to three drams might be collected in a tea-cup per minute. Soon, however, the stream decreased, and gradually degenerated into droppings, which fell, during the time he was eating his corn, in quick succession from the side of his face into the manger. Conceiving pressure likely to prove effectual, I procured one of Salmon's patent trusses, and applied it around the fore part of the head, with the pad pressing firmly upon the orifice. This had more effect than any ordinary bandage could have had, and was unattended with any confinement of the jaws: it however occasioned so much annoyance in pressing the soft parts against the molares, that the animal at length refused to eat with it on; whereupon its use was discontinued. I ought to have mentioned, however, that, finding the orifice of the duct closed internally, I made a perforation through the cheek prior to the employment of the truss.

Next I tried ligature of the duct. I cut down on the duct as it ascends upon the face around the border of the lower jaw, and fastened around it a double ligature well waxed, leaving the ends hanging out of the wound between the sutures employed in closing it. I found the duct so much enlarged, that I at first mistook it for the sub-maxillary vein. Eight hours afterwards, the duct, as large as my fore finger from distension, was distinctly apparent under the skin, all the way from the ligature to the gland: the gland itself was also much swollen, and evinced tenderness on pressure.

2*d Day*.—The duct distended even to bursting; the gland enormously swollen, and very tender. The side of the face puffed a little. Appetite unimpaired.

3*d Day*.—The duct has acquired a firmer feel; gland not so tender, a little pus appearing at the orifice of the wound. The stitches were cut. Liq. Plumb. to the face, which is rather more tumefied. Bol. Purg. ʒvj. Fed on green meat.

4*th Day*.—Much the same. He purges. Pus drops from the wound.

5th Day.—Early this morning the duct gave way at the ligature, and the salivary flux has returned with redoubled force.

10th Day.—The wound below has been gradually healing, and to-day, for the first time since the operation, saliva has re-appeared at the original fistulous orifice.

22d Day.—The wound made in tying the duct has quite healed up, and the saliva has resumed its former course,—flowing down the side of the face; so that the case at present remains in its original condition.

My next experiment consisted in so applying the spring truss across the poll, that the pad pressed upon the parotid gland itself; entertaining a notion that, by diminishing its supply of blood, and at the same time maintaining all its parts closely compressed, I might lessen the secretion, and ultimately suppress it altogether. I continued this for a month without any perceptible benefit.

Failing thus far, I introduced a seton through the cheek, in a manner I have already described: this proved a troublesome affair, but I at length succeeded in establishing it by the use of a shankless metallic button, confined close to the inside of the cheek. The seton was retained for six weeks, during which time, in consequence of its obstructing the issue of saliva from the upper opening, the duct has again given way at the place where it was tied. Soon after this eruption, nothing appearing likely to be gained by it, the seton was withdrawn and abandoned. The relinquishment of the seton was followed, however, by the healing up not only of the wound made through the buccal membrane, but also of the fistulous orifice in the cheek; the issue now being from the place where the ligature was applied.

Wearied and perplexed with frequent failures and the untowardness of the case, and unwilling to make the horse (a favourite and a valuable one) the subject of an operation, formidable, difficult, and not divested of danger, I relinquished all treatment for a time, and rode the animal about in a state of incertitude (useful as he continued in every respect to be) whether I should ever feel inclined to run the risk of submitting him to the only apparent remedy left—extirpation of the gland. Professor Coleman (among several other veterinarians) saw the horse, and advised the operation, as the only remedial step to be taken.

It was during this interval that I had to treat the case I have already given an account of, and the horse returned from grass to the infirmary with his third relapse. On this subject I was urged and necessitated "to do something" by way of remedy. Still averse to the operation, and clinging to a notion I had all along entertained, *that it was possible* to disorganise the gland—it came into my mind to make trial of the caustic injection. Of the re-

sult of the first trial I have made the Society acquainted. I must now encroach upon their attention to hear the particulars of this second experiment.

The horse being cast and properly bound, with a view of conducting the injection with more effect, I made an opening into the main duct, just where it leaves the gland, and, turning the orifice of the syringe upwards, threw in the following injection:— Argent. nitrat. ʒi, acid. nitric. ʒij, aquæ ʒxiv.

The gland received the whole of the injection, and became completely distended from it in every part. I kept the syringe pressed against the aperture for nearly a minute, and then removing it, found that much (if not most) of the injection ran out from the duct. I ought, perhaps, to mention that I tied the syringe within the duct as I would have done an injecting pipe within its vessel. The wound was left open, and a purging ball given.

The injection was performed about eleven o'clock A.M. Towards night the gland began to grow tumid: the tumidity had a firm feel, and was not remarkably tender on pressure.

2d Day.—The glandular tumour has increased, and the tumefaction has extended to the parts in its immediate vicinity. He evinces tenderness on pressure. A little serous fluid oozes from the wound, and, after pressure, come frothy saliva. Liq. plumb. frequently applied. At night, the gland and parts in the vicinity are involved in one mass of tumefaction, which, though not possessing much heat, is exceedingly tender. Skin under the throttle œdematous. He purges.

3d Day.—Much the same. Continue the saturnine lotion.

4th Day.—The tumefaction has rather diminished. But there is a bare place observable upon the infero-posterior portion of the tumour, as if the part had been scalded, which has a soft doughy feel, and conveys an indistinct sense of fluctuation. Cont. lot. plumb. sumat indies, mass. purgant. ʒij. calomel ʒʃs. mass. diuretic ʒij. The appetite has not been affected throughout.

5th Day.—The sense of fluctuation having become more distinct, I punctured the bare place with a lancet, and gave vent to a little serous fluid. Cont. bol. et lot.

7th Day.—The bare patch of skin has commenced the sloughing process. I cannot account for its beginning in this part in particular, unless it be from some of the injection having gravitated and lodged herein. There has been no issue of pure saliva since the injection. A trifling purulent salivary discharge issues from the fistulous opening under the jaw. Cont. bol. et lotio.

8th Day.—The sloughing process is continuing, without my being able at present to determine its limits. Already an oval portion of skin, equal in extent to the surface of an egg, has se-

parated, exposing the cellular substance underneath, opaque and insensible. A linseed meal poultice is kept applied by a many-tailed bandage tied round the neck and in front of the head. *Bol. cont. alternis diebus.*

11*th Day.*—The sloughing proceeds. A serous discharge emitted from the surface.

13*th Day.*—The sloughing is rapidly advancing. The uncovered chasm measures four inches by two. A copious sero-purulent discharge is emitted. The portion of gland above the chasm is still tumefied, and continues very tender to the touch. The appetite and spirits have remained unaffected. Cont. cataplasm. et bol.

17*th Day.*—Large portions of gland have sloughed and come away upon the poultice: one yesterday; two to-day. The adjoining surfaces appear healthy, and are seemingly only waiting for the separation of the remainder of the mortified parts to granulate, and aid in filling up the vacuity. The discharge is now purulent, discoloured by the sloughy masses. The part of the duct remaining, between the angle of the jaw and the place where the fistulous orifice exists, becomes now filled with pus, which every morning is squeezed out. The animal's general health continues good. For these last three days he has been exercised. Cont. bol. and cataplasm.

25*th Day.*—A portion of gland having the shape and volume of an acorn, only being much longer, came away this morning in the poultice. The tumefaction has much subsided, and the ulcerous surface bears a remarkably healthy aspect. Poultice is the only application.

29*th Day.*—To all appearances the entire gland has sloughed away. The chasm is granulating rapidly, and the surrounding border has evidently begun to contract. A genuine pus is copiously furnished. The poultice has been discontinued for two days past, and the case treated as a simple healthy ulcer.

33*d Day.*—Purulent matter is secreted within the duct, which remains, and, from lodging within it, distends it into a sort of pouch. Inject sol. cupri sulphat.

43*d Day.*—The ulcer measures only two inches in its greatest diameter. Astringent injections have been used to suppress the suppurative action within the duct.

45*th Day.*—The horse is ridden out upon the road.

58*th Day.*—Sore perfectly healed. No perceptible enlargement or induration remains; there being only a shallow depression where the gland formerly was, which (unless it be pointed out to any person, in comparison with the opposite side) is unobservable.

The horse continued in my possession two years afterwards,

and remained free from every kind of disorder connected with his old complaint, with the exception of some enlargement of the portion of duct remaining between the angle and border of the jaw: this, however, was at most only a trifling eye-sore, and easily admitted of excision.

Extirpation of the Parotid Gland.

To this formidable operation my attention was first called, by perusing an article in the "*Recueil de Medécine Vétérinaire*," Vol. I, p. 133, entitled "Salivary Fistula cured by the Extirpation of the Parotid Gland, by M. Leblanc, V.S. at Paris." The particulars of Leblanc's case are briefly as follow:—

A horse-dealer, in order to dispose of a horse to more advantage that was jugged on the off-side, prevailed on a farrier to cut out the tumefied glands. Immediately after the operation, as the animal was eating some corn, they were astonished at seeing a stream of limpid fluid from the wound. The actual cautery was employed to stop the issue to no purpose: at length the animal was brought to M. Leblanc, who saw no other means of cure left but extirpation. For three days he prepared the subject for it; and on the fourth, cast the horse, stretched out his head, and rendered the parotid to be excised more prominent, by placing a bundle of straw under the neck so as to press against the opposite gland. Leblanc made a longitudinal incision from one extremity of the gland to the other, much nearer to its anterior than posterior border; next, he cut through the fibres of the panniculus carnosus and retrahens auris inferior, by which he exposed the gland. He put two ligatures around the facial vein, and divided the vessel between them, having first, by accident, wounded it. A similar accident made it necessary for him to tie the temporal artery, in doing which he unwittingly included in the ligature some branches belonging to the portio dura. He had to take up, besides these, several small veins and arteries.

In consequence of the division and ligaturization of the facial nerves, as soon as the animal was risen, he found the lips paralysed. This rendered it extremely difficult for the mare to gather up her corn, which she was compelled to do (like a dog) with her tongue; she also experienced difficulty in swallowing; and, besides, the operation was followed by fever and considerable inflammation of the surrounding parts. This, however, was subdued, and all ultimately did well. The operation was performed in the middle of April; but it was the month of July following before, it appears, the animal had perfectly recovered. It is but justice to M. Leblanc here to state, that he confesses he under-

took this operation without having at all prepared himself by previous dissection; and to add (as a proof of it), that he follows this up by the detail of another case, in which he appears to have operated with great skill and dexterity. He had to tie and divide several veins and some small arteries, but he wounded neither vessel nor nerve on this occasion; which was purely a case of experiment for the operation alone: in fact, the same as was my own case, with the account of which I shall end my paper.

The subject of my experiment was a horse, twenty-seven years of age, doomed by his master to be shot, having become almost useless; still he enjoyed perfect health.

Sept. 26th, 1826. Having cast the old horse, and bolstered up his head with half a truss of straw, after the manner recommended by Leblanc, in order to give prominency to the parotid gland to be excised, I extended an incision from the root of the ear to the lower border of the gland. I then slid a probe under the muscular layer beneath the skin, and carefully divided that, thereby laying bare the glandular substance, which I exposed, both anteriorly and posteriorly, to the full extent the incision through the skin would permit me. This done, the excision of the gland was commenced. During the operation, I found myself much embarrassed by hæmorrhage from veins; two, in particular, which it became necessary to cut through: in all, however, I tied only three veins and one small (glandular) artery. The trunk of the jugular bounded my dissection in front, forming a line of demarcation for my knife; in fact, it was necessary to dissect all round this vessel, to get at portions of the gland, which required great steadiness and precision in the use of the knife. About a pint of blood was lost in the operation. The integuments were brought together by suture; and the chasm speedily became filled with blood, which collected and coagulated in it.

2d Day.—Some tumefaction, but much less than I expected to see. Frothy serous fluid mixed with blood running out of the wound. The swollen parts have a puffy feel, and crepitus is present, in consequence of air getting admission and mingling with the blood in the wound.

6th Day.—I did not see the case again until this day, in consequence of absence. The stitches had given way, exposing an open wound, from which runs a copious issue of sero-purulent matter, along with which can be detected some saliva. Animal's health unimpaired. Wound dressed with spirits of terebinth.

8th Day.—The parts show a disposition to granulate, but it continues to pour forth much purulent matter, without any commixture, however, of salivary fluid. An astringent dressing.

12th Day.—Wound gradually filling up.

28*th Day.*—The wound is now contracted to one-third of its original dimensions. In another week (making altogether five weeks from the period of the operation), I imagine it would be healed: I make this remark, because the animal will to-morrow, or next day, be destroyed.

30*th Day.*—This morning the poor old horse was dispatched. The wound is nearly closed: it still discharged abundance of pus, but no saliva has been seen for some time. The thickening of the surrounding parts has of late very much subsided. His viscera (at the age of 27), not excepting his lungs, were all found in a perfectly sound condition.

SANDY SOIL IN DISEASED COLON AND CÆCUM, AND BOTS IN THE ŒSOPHAGUS.

By Mr. W. A. Cartwright, *of Whitchurch.*

ON the 24th of February, 1827, I saw a mare belonging to Mr. Jones. She had brought a colt last year, and was in good condition all the summer; but towards the end of September she was removed to land of a wet marshy nature, and continued there until nearly Christmas, when she returned to her present pasture, which is tolerably dry. She has lately been rapidly losing flesh and strength, but no medical attention has been paid to her.

Symptoms.—Dung very loose, and containing a few small worms. She can rise on her fore extremities, but has completely lost the use of her hinder ones. She is hidebound, and worn down to a mere skeleton. Recommended that she should be destroyed.

Examination.—The colon and cæcum contained a quantity of liquid fæces, composed principally of soil of a dark colour and gritty nature; and the membrane lining them was of a bluish-black colour, tender, and almost rotten. The muscular coat was also of a dark colour. In the ileum, just before entering the cæcum, there were many flukes, resembling those which are found in sheep infected with the rot. There were in the stomach about forty red bots, of a large size; and in some places they had nearly penetrated through all the coats. In the œsophagus, three or four inches above the stomach, there were nearly 200 large white bots, firmly attached to the cuticular coat: in several places they had eaten under that coat, so as to half cover themselves. The *greater* part of the cuticular coat on which they were situated was of a dark colour, pulpy, and stunk very much. These bots must have nearly obstructed and filled up the cavity of the œsophagus.

The liver and lungs were sound. The pericardium contained about ʒxij of serum, of a pale yellow colour.

Observations.—A question naturally arises in this case, as to the cause of so much sand and soil being taken into the intestines. Was it to correct any acidity in them? or was it instinct that caused it to be taken, for the purpose of irritating and removing the bots from the œsophagus? I have known several horses eat a great quantity of soil without injury; but they have been principally broken-winded horses. This disease is considered by some veterinarians to be caused by indigestion and disordered bowels. It is highly probable that the sand must have caused considerable irritation in the colon and cæcum, and so have produced inflammation and purging.

I am of opinion that bots are not so innocuous as is supposed by some veterinarians; for can it be imagined, that when they penetrate the cuticular coat, and quite into the muscular, and, in some cases, through it, they must not cause considerable mischief? I am likewise inclined to think that worms of every description are, to a certain extent, injurious, especially some of the larger ones. There were about 20lbs. of soil in her intestines, which had been picked up from that spread on the field.

PARALYSIS* OF THE RIGHT POSTERIOR EXTREMITY.

[*By the same.*]

ON Saturday, the 30th of December, 1826, I saw a two-year old filly, the property of Mr. Cuxon, of the Woodhouse, which was supposed to have put the thigh out of joint.

Symptoms.—She was grazing in the field, and appeared to be in perfect health. On driving her forward she could not move her off hind quarter, but dragged it after her, and appeared to have lost all command of it. There was no dislocation or fracture, or any preternatural heat about the joints or any part of the extremity. She could rest some of her weight on it when she backed herself a little and stood still.

I bled her in the thigh vein; and I suppose that she lost five quarts of blood before we were able to stop the hæmorrhage, on account of her violently kicking when we attempted to pin up the orifice; and we were at last obliged to apply a bandage round the thigh. The bleeding had not long stopped when we were astonished to see her move her leg forward nearly as well as usual.

* Query, Rheumatism?—EDIT.

The son of the owner was inclined to fancy that she had been imposing the lameness on us. I directed that the extremity should be bathed with warm vinegar and water, and that the filly should be kept perfectly quiet.

1*st of January*, 1826.—Nearly well. Continue the application. In a few days she was perfectly well.

I have seen one or two cases similar to the above; but they were first affected in one extremity and then in the other, and would get well for a short time and then be as bad as ever, but ultimately get well. Treatment: bleeding, physicking, and putting rowels in thigh, and kept quiet.

In all these cases the animals were out at grass, and the disease was probably caused by their lying on wet ground.

ON VETERINARY MEDICAL EDUCATION.

Letter II.

(Continued from page 133.)

My dear Young Friend,

ONE advantage which you will derive from your admission to the College, is the privilege of hearing the lectures of the professor. An advantage, if you rightly improve the opportunity; a thing of no moment if you are faithless to yourself.

That the lectures of Mr. Coleman are exceedingly valuable I need not tell you; but I must remind you, that if you are content with a careless attendance on them, without subsequent and serious study, the impression they make will be perfectly evanescent, and your time will be uselessly employed.

In the first place, I would say, be constant in your attendance on them. Let no call of pleasure, no capricious whim, not even a slight indisposition, induce you to be absent from one of them. By a single absence you will, in some measure, lose the thread of the professor's argument; and you will probably be ignorant of some principle to which he will afterwards refer, and without which you cannot comprehend the full scope of his reasoning.

Having once rendered your record, or your conception of his doctrines, imperfect, a much slighter temptation will prevail on you to absent yourself a second time; and a habit of inattention and negligence will soon be formed. Make these lectures your own. They are your's so far as your own improvement is concerned. Every day commit the substance of them to writing.

In order to effect this, should you take notes at the time? This is a question somewhat difficult to answer. It depends on the

strength of your memory, and the rapidity of your writing. On the whole I should say, Yes. Mere hints, catch-words, to remind you of the subjects, the arguments and the illustrations, and the order in which they occurred. At the earliest opportunity fill up the chasms. By no means let the day close without this. Let it be, at least, an accurate sketch; and, as far as you can, the condensed substance of the lecture.

After this enquire how far the doctrines of your tutor coincide with your preconceived notions. Argue the matter fairly and soberly with him. Consult the best authors; and endeavour, as you go on, fully to understand the lecturer, and to form your own opinion on the subject.

To the habit of taking copious notes I should decidedly object; for, while you are writing, many important arguments and illustrations will necessarily be lost, and the connexion of the whole lecture will be broken.

While you are in the theatre be respectful and attentive. Common courtesy requires this; and your improvement will be materially connected with it. You know not the magic of attention. It will not only imprint the lecture more deeply on your memory, but it will make the lecture doubly valuable. Your propriety of behaviour, and evident wish to improve, will cause your teacher to identify himself with the matter before him, and to throw himself heart and soul into the business. Inattention, listlessness, and rudeness, will annoy and perplex him; and the subject will necessarily be imperfectly treated.

As to your general conduct towards him: Be uniformly respectful. Endeavour to create in your mind an unfeigned esteem for him. He is your elder, and your superior; and his interest, and duty, and best feelings are, or ought to be, connected with your improvement. There is more in this, perhaps, than is dreamed of in your philosophy. If you dislike or despise him, you will not improve under his tuition; and if you openly manifest that dislike, I will not say how deeply you wound him, but I will tell you that it will not be in human nature for him to exert his best energies in effecting your improvement: it will be a matter of mere indifference or mercenary calculation.

I am no advocate for blind deference to any teacher, or unmanly submission to any authority; but attention and respect are due to your instructors, and will be repaid by increased zeal, warm friendship, and useful service.

As opportunity serves, endeavour to draw your teachers into conversation with you on some recent lecture, some case in the infirmary, or any matter which you do not fairly comprehend; but do not ask twenty questions in a breath on twenty different subjects, to save yourself the trouble of dissection or study. Do

not be actuated by the insidious wish to discover some imperfection, or error, or forgetfulness, nor by the foolish ambition of showing your fancied ability; and never argue with your tutors for victory rather than truth. This is despicable. Discover a real desire for improvement, and I will pledge myself that your preceptors will always be accessible, and grateful for the compliment you pay them, and the confidence you place in them.

As to other lectures, the attendance of the student on them, except they are absolutely and intimately connected with his profession and practice, must depend on circumstances. If his means, or the determination of his friends, will allow him only six or seven months, *he has no time for many other lectures, however valuable they may be.* Dissection, the practice of the College, the lectures of the professor, or those on subjects closely connected with his future practice, and the course of reading and study which I have recommended, will fully employ him.

If, however, he has a little longer time, he should undoubtedly avail himself of the opportunity afforded him by the liberality of several eminent teachers of human medicine. I certainly dislike this seemingly pauper system of education. I am firmly of opinion that the student should receive within the College walls all the instruction he can possibly require. It is so in every foreign seminary, and at no distant period will be so in our's. The great kindness, however, of the gentlemen to whom I have alluded, precludes all painful sense of humiliation; and you may, without scruple, benefit by what they so disinterestedly offer.

Lectures on human anatomy and physiology should not be neglected. The identity of design and the variety of structure in your patients and in man, will be an interesting study, and will materially contribute to prepare you for the society of your natural, and warmest, and best friend, the surgeon of the town or village in which your lot may be cast.

Lectures on the practice of physic should not be forgotten. The principles are the same; the indications of cure the same; but the different means and appliances necessary to accomplish these indications in man and the brute, the different effect of the same medicines, and the stranger difference in the dose, these are subjects both curious and eminently useful.

Natural philosophy and chemistry must by no means be passed over, for the reasons stated in my last letter.

As to your companions at the college, there is no period of your life in which the choice of associates is more important. I trust that it is not necessary for me to warn you against those who, idle themselves, would induce you to wile and trifle away that time on which your future reputation and success depend. An idle

young man should be shunned by you as if the plague spot were on him; for the injury that he will do you, by leading you into little, but too frequently repeated acts of negligence and folly, will not fully develope itself until your course of study is fatally broken into, and the mischief has become irreparable.

You ask my opinion of your College Veterinary Society. It may be most useful to you, but it may be easily and very dangerously abused.

When the debate or the questioning tends to impress more deeply on your mind the grand outline of anatomy and physiology, as founded on that portion of anatomy which you have honestly studied, you may derive considerable benefit from your attendance on the Society. I was present, not a great while ago, when the subject, or the portion of it devoted to that night, was purely anatomical, and I was much pleased to observe how well the proposer of the question stood the badgering he received, and the creditable manner in which he acquitted himself.

When the business of the evening is a kind of preparatory grinding for your examination, you will derive considerable benefit: but when young men who know nothing of anatomy and physiology, and consequently nothing of disease, whether of structure or of function, confidently discuss the nature of maladies, and appeal to their practice and experience, few things can be more ridiculous—none more injurious. How many principles will be promulgated and defended which the surgeon of true information rejects with scorn? How many notions are embibed, founded on careless observation, and hearsay evidence, and exaggerated narration, which the poor student will afterwards have to unlearn?

Until you are perfectly acquainted with anatomy and physiology, diseases had mueh better be let alone. You will not be able to separate the chaff from the grain.

From the discussions of enlightened and experienced men good may be derived, but evil must necessarily result from the effusions of inexperience and presumption.

If, therefore, you should belong to this institution, or any other (and, on the whole, and during the latter period of your time, I should certainly advise it), enter into no discussion for which your previous studies have not prepared you; and regard with indifference, or even with suspicion, every statement the value of which serious and diligent enquiry has not enabled you to appreciate.

My epistle, however, is again getting tiresome; and I must postpone, until some future opportunity, a few remarks which yet remain.

PHILO-VET.

FATAL LACERATION OF THE RECTUM.

Mr. Editor,

If you think the following case worthy of a place in The Veterinarian, it is much at your service for insertion.

Your's, &c.

John Percivall.

ON Monday, 29th September, 1828, at six o'clock P.M. a brown gelding was brought to the Infirmary, having had one of the shafts (the near one) of a six-pounder gun-carriage, during manœuvering in the field, forced up the rectum, to the extent, I found on examination, of about eighteen inches. The horse was rode by a trumpeter, who, not being aware of the accident, urged the animal forward, for several yards, with the shaft thrust into his body. It was at length withdrawn, but with considerable difficulty. At the time the horse was brought and put into a loose box, he expressed great irritation: pulse small, respiration hurried, dullness of the eyes, extremities cold; lies down in the box. Ordered to be raked, and an enema exhibited; clothing, flannel bandages to the extremities; bran mashes, linseed drinks.

Ten o'clock P.M.—The animal manifests extreme pain; pawing his litter, lying down and rising at short intervals, profuse sweats: pulse quick and small. V. S. ℔vj; enema repeated, with ol. olivar. ʒiv; infus. lini. ℔viij stimulants to the abdomen.

Twelve o'clock P.M.—The symptoms in no way abated; enema repeated, and stimulants to the abdomen. No fæces have passed.

Tuesday, September 30*th*, nine o'clock A.M.—The horse continues in great pain, pawing the litter, lying down with his head drawn to the belly, rising occasionally, profuse perspiration, pulse quick and small. Ordered to lose ℔vj of blood; enema continued, with external stimulants to the belly and legs. Apparently somewhat relieved throughout the day.

Wednesday.—No evacuation of fæces or urine, though efforts are made to void the latter. The bladder has been examined per rectum: is found collapsed. Three drachms of aloes given, with ℥ss tereb. Drinks ordered, consisting of equal portions of linseed tea and oatmeal gruel, of which he took copiously.

Thursday the 2*d.*—On my visit this morning at eight, I despaired of my patient: his sufferings are almost indescribable. The expressions of pain most intense—pulse 100, thready, small; respiration greatly accelerated; languor in his eyes; extremities stone cold; frequent but fruitless efforts made to stale; up and down every minute in the stall; profuse cold sweats. The

enema and ball were repeated. Two hours after, on my attendance at the stables, I found death had put an end to the poor creature's sufferings.

Post Mortem Examination.

On opening the belly, and tracing the intestinal canal from the anus, I found that the shaft had produced some excoriation of the peritoneal surfaces, previous to its entering the rectum, into which it had passed about ten or twelve inches. At this part the force of the carriage had driven the shaft through the gut, whence it had been continued alongside of the canal for a short space, and then a second time had forced its way through the intestine, making thereby two dreadful lacerations.

The mucous surface of the intestine was in a high state of vascularity, which appearance pervaded parts both of the cæcum and colon. Considerable effusion of lymph and coagulated blood adhered about the lacerated parts, and incipient union of some parts had taken place. On examining the bladder no urine was found; but the blood-vessels seemed to be somewhat increased in their diameter and number. The only remarkable appearance to me was its contents, of about three ounces of a perfectly white thick fluid, more of the colour and consistency of cream than any thing else. A large proportion of the clysters injected had escaped into the abdominal cavity, through the intestinal lacerations. The near lung was redder than natural.

THE VETERINARIAN, NOV. 1, 1828.

"Licet omnibus, licet etiam mihi, dignitatem *artis veterinariæ* tueri."—*Cicero.*

OUR motto indicates the object of "THE VETERINARIAN," and the duty of its editors. That *object* will, in a great degree, be accomplished by a gradual accumulation of important facts; thus giving us a more extended knowledge of our profession, and materially improving our practice.

There may, however, be circumstances which have had peculiar effect in plunging us into our present lamentable degradation. It is our *duty* to inquire into these, and, if we have not the power to remedy them, at least, honestly to expose them.

That which has, most of all, tended to debase us, is the sadly inefficient state of veterinary education. At present, we will confine ourselves to one point—the limited period allotted for the instruction of the veterinary student. The candidate for a diploma as a human surgeon is compelled to produce satisfactory certificates that he has been engaged six years in the acquisition of professional knowledge; that he has attended three winter courses of anatomical lectures, two of dissections, two on the principles of surgery, two on the practice of physic, two on midwifery, two on chemistry, and one on materia medica; and that he has walked some recognized hospital in London at least one year, or in the country four years.

And why all this? Because life and health are inestimable blessings, and should not be placed at the mercy of the ignorant pretender;—because an accurate knowledge of anatomy, and the laws which govern the animal frame, and the nature and consequent treatment of disease, is the only basis on which good and reputable practice can be founded, and cannot be acquired without long and diligent application;—because the medical profession has obtained a merited degree of respectability, and the time employed, and the expense incurred in this preparation, are a guarantee that the candidate belongs to that class of society whose manners, habits, associates, and lack of knowledge will not disgrace his new brethren.

How stands it with the veterinary surgeon? Is there less difficulty in acquiring a requisite knowledge of anatomy? Is it more easy to obtain a competent acquaintance with the principles of physiology? Is the nature of disease, its symptoms, dangers, and cure, learned with less expenditure of observation, comparison, and judgment? Quite the contrary.

The human surgeon has but one patient, or one class of patients; the veterinarian has many. The horse, the ox, the sheep, the dog, the swine, by turns demand his care. With the structure of each of them, or with some portion of the anatomy of each, it behoves him to be acquainted. Each class of animals has diseases peculiar to itself; and the diseases which are common to all vary materially in their symptoms, their sequelæ, and their mode of cure: and, most important of all, not one of his

patients can tell him the seat of disease or the degree of pain; but he is left to long, diligent, and anxious observation, to catch the fugitive symptoms, and to beware that he does not ignorantly augment suffering or hasten dissolution. Then he requires an education, if circumstances would allow it, even protracted in its length, and accompanied by the severest application.

What, however, is the real state of the case? The candidate for the diploma of a human surgeon, although four or five years have been spent under the roof of a medical practitioner, and useful associations and modes of thinking, and some knowledge, have been acquired, must devote two additional long years to the pursuit of medical science in the metropolis ere he is permitted to appear at the examiners' board. The young aspirant after veterinary fame, without any previous apprenticeship or education, enters at the College, attends a few lectures, walks a few times round the infirmary, and in five or six months is pronounced to be "fully qualified to practise the veterinary art in all its branches."

We have known the country barber, disdaining longer to mow the stubble on his neighbour's chin; the tailor and the shoemaker working at their trade until lecture time, and again to a late hour of the night; the mercer, who at ten o'clock in the morning threw by his yard, and rolled up his ribands, and started for St. Pancras, and at three o'clock in the afternoon was again simpering over his silks and frippery;—we have known these persons, who could have no previous knowledge of the horse, and who had not time to acquire it afterwards to any important degree, in five or six months applying for a diploma, and obtaining it without difficulty.

Here is the main root and source of our degradation. When men thus incompetent, and whose incompetency is manifest to the first groom or sportsman with whom they come in contact, are allowed to assume the title of veterinary surgeons, although they may constitute, and we trust they do, only a contemptible minority of the profession, yet they bring on it undeserved and indelible disgrace. If *some* veterinarians are thus grossly ignorant, what security is there that *any* are skilful?

But how is this? In what manner do these five-month ignoramuses contrive to obtain that diploma, which, bearing the signa-

ture of honourable men, ought to be the pledge of industry, talent, and worth ?

It arises from the faulty constitution of the Medical Examining Committee. They are, with two exceptions, *human* surgeons or physicians—most justly respected in their own profession, but totally ignorant of the practical part of our's.

In what way can they examine the veterinary student ? Not on the minute anatomy, much less the diseases of horses or cattle, but in the most general and superficial manner. Some physician takes the circulation, or the digestion. A surgeon examines the pupil on the origin, course, and functions of the nerves—the structure of the teeth—the mechanism of the eye. (If we had not been before instructed on these points, we should have no difficulty in qualifying ourselves for such an examination in one fortnight.) Then comes the chemical teacher, our sterling and respected friend Dr. Pearson. What questions will he ask ? What questions can he ask ? They must relate to the *chemical* history of the drugs which constitute the veterinary pharmacopœia, so far as he has heard of them, or they are recognized by the College ; and these are principally aloes, and calomel, and sulphate of copper, and the croton tiglium. (Two days more would qualify us for this.) Then comes the professor, or the sub-professor, and with them should "come the rub ;" but they have peculiar notions, and favourite theories, on particular subjects ; and to these their attention is oftener directed than to others. The candidate knows full well what these are. He prepares himself on these points : he adopts the opinions and language of his instructors ; and, having done this, he will seldom fail to obtain the object he seeks.

An examination like this is plausible enough, and, we doubt not, is supposed by the inquisitors to be fair and sufficient ; but less than three weeks' application would qualify a dunce to go through the whole, if not with eclat, yet without marked disgrace.

A few veterinary surgeons added to the committee would soon set this matter right ; and a strict questioning on various points of *veterinary* anatomy never heard of in the present examinations, and on the nature and cause, and symptoms and treatment, of many a disease seldom there mooted, and on the *peculiarities*

of horse surgery and horse practice, would put the acquirements of the candidate fairly to the test, and consign many of these precocious geniuses to some additional months of study.

Could the examiners ever suppose that it was *possible* for the pupil, at the commencement of his attendance wholly uninstructed, in less than half a year to become "fully qualified to practise the veterinary art in all its branches?"

We will suppose that we had the power to turn the tables upon these gentlemen, and, after the preparation of a few little months, to admit "the soldier and the sailor, the tinker and the tailor," into that profession of which they deem it an honour to be members. Would they brook the insult, or would they not indignantly tear the paper which associated them with such practitioners?

We respectfully yet sternly appeal to them, as they will answer it to us, to their own profession, to the public, and to themselves, no longer to sanction these measures, unworthy of their high unblemished characters, and destructive of our respectability. We appeal to our venerable friend Dr. Pearson, who told us, at our last anniversary dinner, although not with perfect accuracy, that "little farther was wanting in the veterinary school, except more time for the labours of the students." We appeal to Dr. Babington, who wished that "the veterinary surgeon could be sent into the country with all the learning of the human physician; for then the veterinary profession would be estimated as it deserved." (All the learning of the human physician acquired by the barber and the man-milliner in five months!!!) We entreat every honourable member of the examiners' board no longer thus to insult, and injure, and debase us.

Well may they, so much of whose early life was devoted to careful, laborious application—over whom year after year passed, and they continued to be anxiously preparing, but were not deemed qualified for the exercise of their profession, and who are now convinced that that was the only time for laying the foundation of science, reputation, and success—well may they scorn to admit at the same board with themselves those to whom so little time had been allowed for the acquirement of fundamental principles, and whose practice must necessarily be mere empiricism.

It is cruel to place us in that situation where our professional existence depends on our being able to apply to circumstances as they arise, the knowledge which we have acquired when we have had time to gain only the most superficial ideas, and the most inadequate conceptions of what we should be, or what we should do.

Gentlemen, we look to you. If you are as you profess, and, as we believe, zealous in our cause, do to us as you would be done unto. If, although you shun association with us, you sometimes compliment us with the title of fellow-labourers in the advancement of science, prepare us for that situation to which, in truth, your kindness and disinterested patronage first permitted us to aspire. We appeal to your good sense,—your honourable feeling,—and that reputation which you would carry unsullied to your graves.

We appeal to the governors of the Veterinary College. We will suppose that some country boor or some petty tradesman has scraped together a little money, and has journeyed to town to study the science and practice of physic, and at the expiration of five or six months has come back with a surgeon's diploma, and declared fully qualified to "practise the art of human medicine in all its branches." Sickness comes on you, or on those whom you love more dearly than yourselves. Would you confidently place yourselves and them under the care of such a man? Would you not deem him an impudent pretender, and conclude that they whose names sanctioned his diploma were incompetent or unprincipled, or both? Common sense would tell you that such a proceeding was disgraceful and mischievous.

You, Gentlemen, have, for many a year, supported and organized a system too similar to this. You have thrown on the country many a veterinarian who *was* not, and *could not* be qualified for his profession. Your horses and your oxen are susceptible of pleasure and of pain. They form a considerable and a justly valued portion of your property. Can you confidently entrust them to one of these veterinary surgeons of your making, who, six months ago, did not know a splent from a spavin, or the near leg from the off? It should not be forgotten that this is done not only in defiance of all reason, nd with manifest injury

to the profession, but in violation of the very principle on which the Veterinary College is founded. When Hunter and Cline, and a few more, the stars of their age, associated together to rescue the inferior creation from the ignorant and brutal treatment to which they were subjected, and founded a school for the improvement of that art, which first began to exist under their fostering care, they marked out a course of study for the veterinary pupil; and they say at the close of it, "It appears from the above division of subjects, that a term of *three years* is sufficient for a complete education, provided the pupils are capable, assiduous, and well inclined." Observe the peculiar manner in which the sentence is worded. No apology is made for the length of time required, but it is implied that it is the shortest possible time to perfect the work; and, even then, supposing the pupil to be capable and assiduous, and well inclined. It should likewise be remarked, that while there is no veterinary school in Europe but ours, in which all domestic animals are not included in the instructions of the professor, so there is not one in which a shorter period than two years is appointed.

By what means, gentlemen, or by what law of yours the intention of the founders, and the original practice of the English and of every European college ceased to be regarded, we know not; but it behoves you to inquire how far you are justified in this violation of ancient usage. Those luminaries of their day, supported by the common consent of Europe, were not likely much to err; and you perhaps will find it difficult to prove that any nearer, or any other road to knowledge has been discovered, than that with which they were acquainted, and which they trod with so much credit to themselves and advantage to the community.

Has or can any thing be urged in justification of this absurd and injurious deviation from the plan of the excellent founders of the Veterinary College?

We are told that "the horse is subject to few diseases, and little time is requisite to become acquainted with them." Who has discovered this? John Hunter and Mr. Cline, and all the continental veterinarians, thought not so, or they would not have named three years as the shortest duration of the pupil's residence at the college.

We are fully aware that careless and idle practitioners will recognize little beside inflammation of the brain, or the lungs, or the bowels, or the kidneys; but post mortem examinations have convinced us that, as in the human being, so in the quadruped, every viscus and every part is occasionally the seat of disease, although we have not yet the skill, or have not used sufficient close and accurate observation, to enable us at all times to distinguish the part affected. Our French neighbours, who, at least, beat us in the diagnosis of disease, have drawn up a long and fearful catalogue of the maladies to which our domestic animals are subject.

The assertion that the horse is subject to but few diseases is false in fact, and dangerous in practice. It encourages that carelessness and want of discrimination and classification with which many veterinary surgeons may be justly reproached. If, however, the horse had been subject to only a few disorders, there are cattle, sheep, swine, dogs, and a variety of inferior animals, who are likewise the victims of diseases, and all their maladies form an aggregate which the most talented and indefatigable student could not, in six months, perfectly understand.

"The treatment of the diseases of cattle, sheep, swine, and dogs, is not taught at the Veterinary College." This is a lamentable deviation from the intention of the founders of the institution, which should be speedily remedied, and not made the pretext for greater deviations. One act of negligence will not excuse another.

Now comes the main argument,—"If the pupils are compelled to remain at the Veterinary College two or three years, their education will become so expensive, that comparatively few will be able to sustain the expence." Be it so.

If the expence of the education of the human surgeon were much diminished, double or treble the number of students would flock to the medical schools. Would this be an advantage? It would put money into the pockets of the lecturers, but would the profession or the public be benefitted?

If at a little expence every village empiric or country bonesetter could be dubbed a surgeon, the profession would be inundated with uneducated and incompetent practitioners, and the health and lives of his majesty's subjects would materially suffer. It is the expence attending a surgeon's education which keeps the pro-

fession select and respectable, and the object of honourable ambition. It would be so with the veterinary surgeon. If two years' residence were required at the Veterinary College, the number of students might probably be diminished, but their character would be improved. They would come with better preparation, and they would have fairer opportunity to do justice to themselves and their profession. They would, from education and proper feeling, avoid the errors, and habits, and associates of some of their brethren. Others of the same, or perhaps a still superior grade of society, would be tempted to join us; and although we should never attain an equality with the human practitioner, we should be more worthy of, and much more likely to possess, his friendship and confidence.

The number of students might be diminished, but not possibly to any considerable degree. They whose means were insufficient to enable them to remain the full period, might come, *as they do now*, for a little while, and might return to their forges with a certain degree of improvement. The fees paid by them would still belong to the professor, and, if his income was somewhat diminished by the change, he would continue to pocket no despicable sum. He would have no just cause to complain if he received all that the true interest and respectability of the profession would permit; or if he did complain, and the governors would listen to his complaint, he might be reimbursed from the funds of the college.

The inadequate instruction of the pupil, and particularly on this point, is the main cause of our present degradation; and in some cavalry regiments, the veterinary surgeon, although a gentleman, in virtue of the commission which he bears, is not permitted to mess with the officers from this peculiarity of his medical education, and the uncertainty, we were going to write the improbability, of their being able to associate pleasantly with him.

While we censure the veterinarian thus situated for quietly yielding to the exclusion, and compromising the dignity of his profession, we truly pity him. The ensign meets and converses freely with his commanding officer. The surgeon, and even the assistant surgeon, associate on equal terms with those who bear his majesty's commission, but whom the veterinary surgeon is compelled with all due humility *to cap*. Let our examiners and our

governors imagine how galling this must be to the man of education and common feeling. But if those who are excluded are not men of education, and therefore unworthy to associate with their brother officers, shame on the system which places them in a situation, in which the utter degradation of our profession is thus exposed.

Again; we happen to know other instances in which the veterinary surgeon, by extraction, and education, and habit, a gentleman, is readily and gladly admitted to the regimental mess. Even he is taught to feel our debasement. He does mingle with the officers of his regiment, but it is under painful restrictions. "We "respect you," the commanding officer will say to him, "and "are happy to see you among us; but if you associate with those "of whose ignorance and vulgarity we have seen too much, the "leading men at the alehouse, and the friends and companions of "our servants, you will not do for us. Choose between the two. "You may belong to the one or the other, but to both you can-"not." Why, this is sufficiently humiliating to the man who loves his profession.

But we are transgressing all bounds. We leave our case in honourable hands, and confidently expect that they will do us justice.

Review.

Quid sit pulchrum, quid turpe, quid utile, quid non.—*Hor.*

A TREATISE ON INGUINAL HERNIÆ IN THE HORSE AND OTHER MONODACTYLES.

By GIRARD, *Director of the Royal Veterinary School at Alfort*, 4*to*, pp. 145, *with Lithographic Plates. Paris*, 1827.

(Continued from page 374.)

THE treatment of a disease, to be rationally conducted, must be based upon some grand or leading principle of action—upon the

abstraction or destruction of that to which is owing its origin or continuance—in the present instance, to the release, either by reduction or abscission, of the displaced viscus.

Epiplocele is dangerous only when complicated with other affections; whereas enterocele is always a serious affair. The first concern of the veterinarian in these cases is his diagnostic; his next, the due appreciation and scientific employment of the different resources furnished him by art for subduing the malady: the case, however, may be incurable, or of such a nature as would evince temerity in being undertaken with any prospect of recovery.

Astringent applications, and reduction, either by the taxis or the division of the stricture, comprise the means generally resorted to: veterinary surgery, unfortunately, furnishes us wish no trusses or suspensory bandages. At the very onset of an inguinal hernia, while the tumour is yet only visible at intervals, and the animal's health continues unaffected, nothing more is commonly done than bathing the animal in some river, or using astringent fomentations or *injections*.

These means, M. Girard, with much reason, adds, prove merely *palliative,* answering no other end than staying for a while the progress of the hernia. He does not inform us how or when the *injections* are to be used. Does he intend them for the sheath? Or would he open the scrotum, and throw them into the cavity of the tunica vaginalis (as is done in human surgery for hydrocele), with a view of exciting adhesive effusion, and consequent obliteration of the passages? This latter expedient never struck us before; but now it has suggested itself, we are disposed to regard it as worthy of future consideration.

I.—OF REDUCTION BY THE TAXIS.

By which is meant the return of the hernial part by the hand into the cavity of the belly.

This is, in many cases, practicable, but very rarely proves efficacious; indeed, can only be so while the ring remains in its natural state, the hernia recent, and there is yet no stricture or impediment to the reception of the gut. Whenever the neck of the sac has become enlarged, the reduction can prove but temporary, unless it be followed by castration, the only means of causing contraction of the canal. If, after a thorough examination of the parts, reduction be considered practicable and profitable, no time should be lost. Should the animal quietly submit, the operation may be performed while he is standing, by introducing one hand into the rectum, and drawing up the protruded gut; in cases of resistance or difficulty, however, it is best to cast our patient, and then we may work with both hands at the same time, in a manner previously described. The operator will only recollect, that force in drawing up the gut is to be avoided as much as possible, the consequences too often being inflammation, gangrene, rupture."

After the reduction, should there be any good reason to appre-

hend a return of the hernia, either from previous attacks of colic or the enlarged condition of the ring, M. Girard recommends certain precautions: such as keeping the animal down, and upon his back, for an hour or two, to give the gut time to resume its proper place and position; and, after he has risen, to put him into a stable so prepared that his hind parts may be elevated considerably beyond the fore; and to give him nothing but straw and water-gruel for food. He advises us also to draw blood; administer enemæ; foment the belly; and use injections; according as there is any appearance of abdominal disorder. In cases of difficulty, or in which there are symptoms of colic or strangulation, we shall have occasion to bleed, and largely too, before we set about employing the taxis. Our author mentions one case in which the hernia, which had before constantly returned, was retained by a T bandage; but the gut, at last, became strangulated by neglecting the bandage while the animal was at work. Of the three tails of this bandage, which was made of calf's leather, two came round the sides, embracing the flanks; the third passed backward, and terminated in a sort of crouper, which embraced the root of the tail, and joined the two lateral parts.

Mr. W. Percivall mentions a case in his "Lectures*," in which the hernial tumour was blistered with apparent advantage; and when we come to learn the inapplicability of bandages and compresses of all kinds, we may be inclined, in the midst of difficulties and dangers, to make trial of so simple a remedy.

II.—OF THE OPERATION IN GENERAL.

Concerning which M. Girard informs us, that

Chronic enterocele (which consists in a dilatation of the inguinal apertures), hernia re-appearing after reduction by the taxis, and all herniæ irreducible either on account of their volume or stricture at the neck of the sac, or any other circumstance, require a surgical operation more or less complicated, according to the nature of the case: sometimes consisting simply in the division of the stricture, but oftener demanding (subsequent) castration to render the reduction effectual and permanent.

a.—OPERATION FOR CHRONIC ENTEROCELE IN STONE-HORSES.

This being the simplest form of operation, and many directions for it being applicable to others, our author speaks of it first.

Of these herniæ, some are reducible by the taxis; others, irreducible: their reduction, however, rarely proves but temporary; the operation of castration *(à testicule couvert)* being required to complete the cure. Again, the hernia itself may be simple; or it may be complicated with hydrocele, sarcocele, varicocele, or adhesion.

* Vide Vol. II, page 60, in a Note.

Providing there be no sarcocele, and the hernia be of the reducible kind, the operation will be free from all diffieulty. The animal being cast and turned upon his back, the operator will seize the testiele with his left hand, and draw it out as much as possible, while with the right he is pushing the hernial viscus back through the ring, taking care to make his compression *on the sides* of the tumour: should there appear any unusual obstacle, he may, by giving the testicle to an assistant, employ both hands in the manipulation. The elevation of the croup, by taking off the gravitation of the contained viscera from the ring, proves the most favourable position; indeed, this is often sufficient of itself for the return of the protruded parts. Also, in some cases, it will be found of advantage to draw out the scrotum, which, by compression, is forcing the hernial swelling against the ring. We must avoid, if possible, the practice of drawing the gut in with the hand in the rectum: it is dangerous, and may aggravate the malady.

The bubonocele reduced, the operator proceeds to castration, *à testicule couvert*. The only special precautions which M. Girard thinks requisite in the present case, are—that in cutting through the scrotum and dartos, the hernial sac be not opened; at the same time, that the separation of the sac from the dartos be as complete as possible, to give the utmost effect to the clams, which should be fixed close to the ring. Before the clams be closed, be sure that no skin, and, above all, intestine, be included within their gripe; for the latter did happen in one case to an experienced operator (M. Roupp), and gave rise to violent colics, which were relieved only by casting the animal a second time, and removing and placing afresh the clams.

Sometimes the protruded gut, distended by an accumulation of contained matters, becomes strictured and strangulated, either by the ring or the neck of its sac, thereby rendering its return impracticable. In this case, we must have recourse to the *operation for strangulated hernia*, which will be described hereafter. Thickening of the membranes will render the dissection of the dartos from the sac tedious or difficult; and it may exist to such a degree (in one case they were found an inch in thickness) as to compel one to substitute a strong waxed ligature for the clams, for the compression of the chord, which should be fastened by a *running knot*.

In the case of sarcocele, the operator must be guided by circumstances. Should the tumour consist principally of intestine, the operation is to be conducted as in the case of thickened membranes. Sarcocele may render the tumour so firm and compact as to deprive it of every sign or feel of containing intestine; and if the operator neglect to explore the ring, this may lead him into fatal error, should he determine on the removal of the sarcocele. Whenever, therefore, in such a case intestine is discovered, he must make himself certain about its return before he offers to apply clams or ligature to the tumour of the sarcocele.

Our author next tells us, that adhesions between the hernial part and its sac are so rare, that he has met with but two examples of the kind, and one of these occurred in a lamb. A communication with which we have been recently favoured by Mr. C. Percivall, appears to prove that adhesions between the testicle and its vaginal covering are by no means uncommon in India, although

it is an occurrence extremely rare in this country; which is probably explicable by our practice of emasculation. When adhesions are found, it becomes necessary to open the sac and destroy them, before the reduction can be accomplished: in which case the clams must afterwards, in course, be placed upon the bare chord.

In general, chronic hernia gives us all the necessary time to decide on the operation, and to prepare the animal, by regimen or previous bleeding, to undergo it: herniotomy only becomes urgent when the descent is complicated with stoppage and strangulation.

In regard to medical and domestic treatment after the operation, the veterinarian must be guided by circumstances, which his own good sense will enable him better to estimate than any directions that can be laid down. Some cases will require blood-letting, injections, and purges; all will demand warmth, quietude, and a rigid confinement to a fluid or some readily digestible diet. It is also of consequence that the animal be so placed that he stands with his croup raised.

In the cases which M. Girard has published in confirmation of what is above advanced, it appears that it is usual to take off the testicle after the application of the clams, but to leave the clams themselves on until they (in consequence of the shrinking they produce) spontaneously lose their hold: in one instance curved clams were found preferable; by turning their convexities towards the ring, the pressure became more efficacious. In one case, the animal was no sooner turned upon his back, than the intestinal mass within the scrotum entirely withdrew into the abdomen, and dragged along with it the testicle, which organ the operator afterwards sought in vain. The consequence was, that it became necessary to release the animal, and suffer him to rise up and walk about for a time, in order to bring down the hernia afresh. This shows the utility of the practice (occasionally instituted) of seizing hold of the testicle immediately the horse is cast, and retaining it until he is turned and prepared for the operation, at which time the assistant takes it. M. Lenguenard, to whom this accident occurred, calculates that about one-fourth of the Norman colts are foaled with hernia; but that in most of them it disappears in the course of growth.

One of these cases, in particular, calls for especial notice, not less on account of danger to the operator, than of the digressions he found it advisable to make in the course of the operation. The hernia was not only chronic, but was very large, and the subject of it advanced in years. Professor Verrier was the operator, and was assisted on the important occasion by his colleagues and a great number of pupils.

The bulk of the tumour altogether being so prodigious, the Professor determined to abscise a portion of the scrotum, and with that view carried a transverse incision completely around it, deep enough to lay bare the vaginal sheath, which he afterwards did by stripping it of the dartos above, while, below, the coverings were dissected off altogether. The sac was then punctured below, and gave issue to some yellow serum. The next step was to get firm hold of the testicle, which being accomplished, with the other hand the operator manipulated the hernial mass towards the ring. As soon as he had in this manner obtained an interval, he placed a ligature around it, dividing the hernia from the testicle; and two similar ligatures were afterwards made at distances of two or three inches higher up, according as the reduction proceeded; and thus the whole swelling was reduced nearly to the size of a fist, which was still further elevated, and at the same time confined close against the belly by the application of clams. The denudation of the scrotum rendered the removal of the other testicle indispensable, which was effected, *à couvert*, by clams. The animal, being released, was put into a place so prepared that his croup was raised, and he could not lie down. Soon after he had risen the hernia disappeared, and never afterwards descended. On the seventh day the clams fell off. The only obstacle to his more speedy recovery was the formation of *champignon* (fungous excrescence) on the chord; but which was subdued by the second application of the actual cautery at a white heat.

Miscellanea.

ON DIVISION OF THE VAS DEFERENS AS A SUBSTITUTE FOR CASTRATION.

WE request the attention of our veterinary readers to some novel and very important observations by Mr. Lambert, a scientific and zealous surgeon, on the consequences of the division of the vas deferens. They were made at a meeting of the London Medical Society in May last. We extract the report of the Lancet, which was the fullest and most satisfactory.—Vide *Lancet, May* 24, 1828, p. 251.

The discussion was on chronic enlargement of the testicle. After some excellent remarks on the nature, causes, and treatment of this complaint, Mr. Lambert, in conclusion, called the attention of the Society to the proposition of dividing the vas deferens, in lieu of castration. From experiments which he had instituted on dogs, he had found, that by tying the duct, by simply dividing it, or removing a portion, absorption of the testicle ensued. He was not prepared to say in what diseases of the human testicle this particular operation was applicable; but it might certainly be employed as a substitute for castration on the horse, a most dangerous operation. Mr. Lambert said, that his attention had been directed to the subject by Mr. J. Morgan, subsequently to which, he found that the operation of dividing the seminal duct had once been performed on the human subject, in a case of disease of the testicle, and that absorption of the gland had ensued. He was not aware of the precise nature of the disease, but the whole of the cord, if he recollected rightly, was divided. It had been stated that a division of the arteries of the chord was sufficient to produce absorption of the testes; on this point, however, he had made no experiments.

Mr. Holmes said, that he had, with a pair of scissars, cut through each spermatic cord of a male cat, and the consequence had been, that the testicles were nearly wasted away, and the animal was entirely deprived of generative powers, and of sexual appetency.

Mr. Kingdon remarked, that he could not see in what cases of disease the operation would be beneficial. As a substitute for castration in animals, he thought the idea highly ingenious, and, if substantiated by further experiments, worthy of general adoption.

Mr. Callaway inquired whether excruciating pain was not produced in tying the vas deferens of the dog; he had remarked, that during the operation of castration, in laying hold of the vas deferens, in order to secure its artery, the patient always experienced great pain, and this apparently independent of the nerves by which it is surrounded.

Mr. Pearson said, that in the year 1814 he had performed the operation alluded to upon an old stallion: the result was, that the testes wasted, and the animal totally lost his sexual appetency, at the same time losing many of the external physical characters of the male. Since this operation was performed, he had submitted two young asses to a similar procedure, and the results were the same.

We offer these remarks to the serious consideration of our brethren, and entreat the communication of their experience on the subject.

ANALYSIS OF SALIVA.

By M. M. TIEDMAN *and* GMELIN.

BERZELIUS had published a careful analysis of the saliva of the human being.

Water - - - -	992.9
A peculiar animal matter - -	2.9
Mucus - - - - -	1.4
Alkaline muriates - - -	1.7
Lactate of soda and animal matter	0.9
Pure soda - - - -	0.2
	1000

M. M. TIEDMAN and GMELIN give the following result of numerous experiments on the saliva of man, the sheep, and the dog:—

Human saliva contains from 1 to 2.5 per cent. of solid matter; that of the dog contains more. The various kinds of saliva consist of, 1st, the principle of saliva (*speichelstof*); 2ndly, osmazome; 3dly, mucous matter, which appears to be held in solution by the carbonate of potash; 4thly, probably a little albumine; 5thly, in the human saliva, a fatty matter containing phosphorus; 6thly, soluble salts, consisting of acetate of potash, the presence of which, however, cannot be ascertained by any direct means, but only by incineration; carbonate, or probably bicarbonate of potash, which in the sheep occasions the saliva to effervesce with acids, and which is found in greatest quantity in the sheep, next in the dog, and least of all in man; sulphate of potash in very small quantity in all; muriate of potash; an alkaline sulphocyanuret, most in the human saliva, very little in the sheep, and none in the dog. The muriate in man is almost entirely that of potash; in the dog and sheep it is muriate of soda, with very little muriate of potash. The contents of the saliva which are insoluble in water are, phosphate of lime, less carbonate of lime, and very little carbonate of magnesia. (*Ann. de Chim. et de Phys.* tom. xxxv, p. 266.)

THE VETERINARY MEDICAL SOCIETY.

ON Wednesday, the 15th of the last month, the Veterinary Medical Society held its first meeting for discussion. We have great pleasure in having obtained permission to insert, nearly at length, the Essay on Fistulous Parotid Duct, read by Mr. W. Percivall. We will not say that it embodies all that was known on this interesting although rare complaint, because not one of our veterinary writers has touched upon it; but we will affirm, that it contains almost all that could be wished on the causes, symptoms, progress and treatment of the disease. The account of the operations which he, first of our English veterinarians, and hitherto, we believe, the only one, has undertaken, will be read with peculiar interest.

A somewhat irregular, but very useful, discussion succeeded, in which Messrs. J. and W. Percivall, Field, Godwin, Henderson, Fenwick, and Youatt, bore the principal share. Some beautiful plates of the parotideal region were exhibited, and a careful dissection of the parotid gland in situ, with the whole course of the duct; and also of the gland everted, to shew its connexion with the fifth and seventh pairs of nerves, the jugular, and the carotids.

It seemed to be generally admitted, that the fistulous orifice will usually be closed by the proper application of the caustic or the cautery; and that it will even, in a few instances, spontaneously heal; but whether accompanied by the establishment of the old passage, or the accidental formation of a new one, or a cessation of the salivary secretion in the parotid gland on the affected side, did not clearly appear.

It was the prevailing opinion, that every possible means of cure should be attempted before the surgeon had recourse to extirpation, an operation that had succeeded in the hands of a skilful anatomist, but which was a most delicate and difficult one, and in the hands of a skilful anatomist alone could by possibility succeed.

The injection of a caustic liquid into the parotid, through the medium of its duct (one gentleman, indeed, spoke of two ducts to each parotid, and gave us high authority for it too, although he could not induce many to forget or to distrust the result of their anatomical researches), and thus disorganizing the parotid, and causing extensive sloughing of its substance, was, in refractory cases, deemed preferable to extirpation. Some important branches both of blood-vessels and nerves, could scarcely be avoided by the knife, but nature, even roused to a destructive process, would be careful to spare every part essential to the well-being of the animal economy.

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THE

VETERINARIAN.

VOL. I. DECEMBER, 1828. No. 12.

ANATOMY OF THE HORSE.

(Continued from page 351.)

OF THE EXTREMITIES.

IN number, four.—*Disposed* in pairs.—*Divided* into fore and hind extremities.

I.—THE FORE EXTREMITIES.

Situation.—Antero-lateral parts of the trunk, from which they proceed downward.

Division.—Into shoulder, arm, knee, leg, and foot.

OF THE SHOULDER.

Constituted of the scapula, superiorly; and of the humerus, inferiorly.

BLADE BONE (SCAPULA).

Situation.—Antero-lateral part of the thorax. Its position is oblique, the antero-superior angle being directed forwards and upwards; the postero-superior, downwards and backwards. The former rises above the transverse process of the fourth dorsal vertebra; the latter is opposed to the angle of the seventh rib. The coracoid process comes opposite to the sternal extremity of the first rib.

Form.—Triangular: inferior angle irregular and detruncated. Broad and thin, superiorly; narrowing, but growing thicker and more substantial, inferiorly.

Division.—Into two surfaces, three borders or sides, and three angles.

SURFACES.—*External* and *Internal.* The external, sometimes called the dorsum scapulæ, is divided unequally into two

superficial concavities, named the fossæ antea et postea spinatæ, by the spine, a longitudinal eminence arising gradually from the superior border, and terminating imperceptibly in the neck, the smooth contracted part above the lower extremity of the bone: the posterior is thrice as large as the anterior fossa; the one giving attachment to the antea spinatus, the other to the postea spinatus muscle; and the spine to the trapezius. In the posterior fossa, about where it joins the cervix scapulæ, is the medullary foramen, directed downward.—*The internal surface*, also called the venter scapulæ, and sometimes the subscapular fossa, is smooth, though uneven, being excavated in the middle, flattened laterally and inferiorly, and is marked by the attachment of muscles: in the middle, and principally by the subscapularis; around the posterior angle by the teres major; superiorly by the serratus magnus; still higher, along the border, by the rhomboidei.

Borders.—The superior, nearly straight, but little more than half the length of the lateral, is thick, and presents a grooved scabrous summit, into which is fixed the cartilage of the scapula, forming a flexible plate of considerable breadth, diminishing in thickness as it ascends from the bone, and terminating in a thin convex edge, which is inclined inward.—*The anterior border* describes the figure of an inverted S. It is thin, and presents a sharp edge superiorly; below it grows obtuse and rounded, and terminates in the coracoid process, a rough hemispherical prominence, presenting in front of the shoulder-joint, to which is affixed the coraco brachialis and flexor brachii.—*The posterior border* is obtuse, rounded, and smooth, except that, inferiorly, there are some few unimportant asperities: it affords attachment to the teres minor and large head of the triceps extensor brachii.

Angles.—The two superior are rectangular and sharp: the postero-superior has, externally, a prominence just below it, marking the origin of the teres major.—*The inferior angle* is represented, or, rather, has its place supplied, by the glenoid cavity—the smooth ovoid shallow cup, notched inwardly, formed for articulation with the head of the os humeri: it is rendered deeper by a marginal cartilage; and has around its border inequalities and porosities, to which is fixed the capsular ligament. Between the glenoid cavity and the coracoid process, internally, is an excavation, serving for a passage to the tendon of the subscapularis.

Connexion.—The scapula is attached to the thorax by the several muscles passing between them; also by two ligamentous fasciæ.

Development.—In the very young subject, the coracoid process forms an epiphysis; in old age, the cartilage of the scapula takes on ossification.

HUMERUS.

Situation.—Between the scapula and the arm; placed in an oblique but contrary direction to the scapula, viz. downwards and backwards; whereby an angular space, of considerable extent, is left between the two bones.

Form.—Cylindroid; presenting the appearance of having been twisted round itself.

Division.—Into a body and two extremities.

Body.—Angular, with expanded flattened sides, superiorly; contracted and rounded, inferiorly. From its upper, fore, and outer part, projects the tuberosity; whose point is roughened by the insertion of the levator humeri. The outer side of the body is excavated and smooth; it is occupied by the humeralis externus: the inner side is rather prominent and roughened, and exhibits a small scabrous eminence, which receives the tendons of the latissimus dorsi and teres major; also, lower down, we find the medullary foramen, pointing downwards.

Superior extremity—Larger than the inferior, presents for consideration a head and four tubercles.—*The head* is the hemispherical smooth part projecting posteriorly: it is designed for articulation with the glenoid cavity of the scapula, which it much exceeds in extent of superficies, and thereby obtains more freedom and variety of motion. Into the irregular and indented groove by which the head is surrounded, is fixed the capsular ligament. Anteriorly, the head is surmounted by the tubercles: the three directly in front are anti-articular, and have between them two smooth grooves, which, as well as themselves, are covered by cartilage, and altogether serve as a pulley for the tendon of the flexor brachii to play over. The outer articular tubercle is joined by a protuberant ridge with the tuberosity. The fourth, or outer tubercle, serves to guard against dislocation.

Inferior extremity—Displays a specimen of the diarthrodial or pulley-like articulation. It consists of two condyles, distinct from each other posteriorly, being there separated by a deep ovoid fossa, into which is received the olecranon of the ulna; but united, inferiorly and anteriorly, into a broad semicylindrical articular surface, divided by a prominence encircling its middle into two depressed compartments, of which the inner has twice the breadth of the outer, and bounded by two lateral prominent edges: furthermore, the condyles, of which the inner is larger and more projecting behind as well as before, meet at an angle above the fossa, and there vanish in union with the body. There are also two scabrous pits above the articular sur-

faces in front, which, like the cavity behind, occasionally receive processes of the bone below.

Connexion.—The head of the humerus is adapted to the glenoid cavity of the scapula; the condyles are fitted into concavities upon the upper extremity of the radius.

Development.—In the young bone, the head, condyles, and tubercles are epiphyses.

OF THE ARM.

The arm is composed of a single bone, the *os brachii*, which corresponds to the human radius and ulna united together.

ARM-BONE (OS BRACHII.)

Form.—Cylindroid; flattened before and behind; slightly curved forwards.

Division.—Into radial and ulnar portions.

THE RADIAL PORTION consists of a body and superior and inferior extremities.

The body is long; prominent and smooth anteriorly; slightly excavated and roughened posteriorly, where it is pierced in a direction downward by the medullary foramen: the former is clothed by the extensor muscles of the leg and foot; the latter by the flexors of those parts.

The superior extremity, like the inferior, expanded into greater breadth than the body, presents an articulatory surface, divided, by a gentle eminence running across the middle, into two concavities, of which the inner is broader and nearer circular than the outer; the latter, indeed, has a superficial rising, taking the direction which makes a similar but imperfect subdivision of it: these concavities receive the condyles of the humerus. The external lateral process is more prominent and sharper than the internal, and is surmounted in front by a small tubercular eminence: to these processes the lateral ligaments are attached; the eminence serves also to deepen the outer cup of articulation.

The inferior extremity is remarkable for the number and variety of its articulatory surfaces, and for presenting a hiatus extero-posteriorly, as if a piece of the bone had been chiselled out. It possesses three articulatory surfaces. The largest, or inner one, is quadrilateral in outline, sigmoid in superficies; the middle is similar in form, but of smaller dimensions; the outer, or smallest, is an ovoid convexity. The internal lateral process is the most prominent; the external has a groove along it. The bone is also grooved in front by the passage of the extensor tendons.

THE ULNAR PORTION consists of body, projection, and articulatory surface.

The body is the tapering triangular part which is firmly united above, but more intimately below, with the radial portion; between the two is an interval, admitting of the passage of a circulus of blood-vessels.—*The surface* composing part of the humero-brachial articulation, in form a semilunar concavity, is only in part articulatory, the lower half presenting roughened inequalities for ligamentous attachment: it is adapted to the smooth trochleal surface between the humeral condyles behind.—*The projection*, named *the olecranon*, the part corresponding to the elbow in man, is one of considerable magnitude, standing out in a direction upwards and backwards from the upper extremity of the radius, is prominent and uneven on its outer side, excavated and smooth on its inner, and terminates in a broad, rough protuberance, into which is implanted the triceps extensor brachii. In addition to two *sides*, it possesses two borders, both sharp, and disposed in curvatures looking inwardly: the anterior terminates in a projecting point, which forms the superior boundary of the articular surface; the posterior extends down, and becomes continuous with that of the body.

Connexion.—With the humerus, above; with the scaphoid, lunar, and cuneiform bones, below.

Development.—In young life the ulnar portion forms a distinct bone from the radial, the two pieces corresponding to the ulnar and radius in man or the dog: indeed, the former in the colt extends nearly to the knee; but as life advances, the two portions become so completely amalgamated and cemented together, inferiorly, that no longer can any trace be found of their original separateness.

(To be continued.)

Communications and Cases.

Ars veterinaria post medicinam secunda est.—*Vegetius.*

ON THE DIFFERENT METHODS OF CASTRATION.

By W. Goodwin, *Esq. M. R. C. S., and Veterinary Surgeon to the King.*

[Read at the meeting of the Veterinary Medical Society, Oct. 29, 1828.]

MY attention having been accidentally called, by a French Veterinarian, to a method of castrating the horse, as it is usually performed and generally approved of in France; and an opportunity having presented itself, during my French friend's stay in London, to perform it, I was led, under his guidance, by way of experiment, to adopt it in a case that happened at the time to come under my care for operation.

The result proving very satisfactory, I was induced to practise it in several others that I have since had to operate on; and I am now desirous of laying before the profession, through the medium of our Society, an account of my little experience in the performance of this operation, in order that its merits may be duly canvassed, and put to the practical test by other practitioners. The novelty of performing a new operation of this kind has possibly induced me to attach greater importance to it than it merits; and though I may in this way have formed a higher opinion of it than I should otherwise have done, it shall be my study not to conceal from you any part of the unsuccessful cases that have come under my notice.

In enumerating the various methods of operation that are generally practised, it is not my intention to enter into a minute account of them, but rather to advert to them only as I may find it necessary, in comparison with the operation I have just alluded to.

Castration is a surgical operation, that consists in either removing certain organs necessary to propagation, or in annulling their functions. In this country the operation is performed by removing the testicles of the male, and the ovaria of the female. But in others, this effect is produced by destroying only the structure of the testicle, as is the case in this operation on the horse in India. In France, too, bulls are never operated on ex-

cept by an operation which they term bistournage, which consists in obliterating the vessels of the spermatic cord, by turning the testicles round, and confining them in their twisted position, by the side of the cord, so as to produce castration.

It has also been lately asserted, that dividing the vas deferens will effectually castrate the animal; that the duct being destroyed, the testicles become absorbed, and no longer exert their influence. This operation, it has been stated, was performed on an old cat, by way of experiment, and succeeded to the utmost: whether the same effect would follow on a horse, is an experiment that may be worth trying. We are all of us, more or less, called upon to perform the operation; and often under such circumstances as to require our utmost skill to insure its success.

The object we have in view in castrating the horse, is, generally, to bring him more under our controul, and better fit him for domestic purposes; yet, nevertheless, it is a consideration to know how to perform it with as little loss of time as may be necessary. To the proprietors of cattle it is of the utmost importance, when fattening animals that require this operation, to have it performed with the least loss of condition in them; and I am surprised that the only method employed for bulls in France is the one I have already mentioned, and that it should scarcely, if at all, be known in this country.

Experience teaches us, that castration in young animals is less dangerous than in old, and that when performed at an early age, before the genital organs are susceptible of secretion, we seldom find the result unfavourable. On the other hand, early castration has its disadvantages; for when the operation has been performed on a young animal, whose growth has not been fully attained, it influences, more or less, different parts of the body, interferes with their development, and deprives them of the strength and beauty of the entire animal.

It may be asserted, that no operation can be available in all cases, and that we must be guided in our selection by the circumstances of the case. However true this may be, yet there exists so much controversy of opinion amongst practitioners as to the best, even under similar circumstances, that I am inclined to believe we are yet ignorant of a method of operation that possesses a decided superiority.

An operation well performed under favourable circumstances, and succeeding to the utmost of our wishes, goes a great way to establish a proof, that the same, performed under similar circumstances, will do equally well. And if it be admitted, that cases do occur which require different methods of operating, I trust the

one I shall presently call your notice to will be found to have superior advantages in peculiar cases.

The operation, however practised, requires our experience to give us dexterity in its performance; for there can be no doubt, that the less time be taken up in performing it well, the less pain and irritation will be created; and though this operation is, perhaps, oftener intrusted to the hands of men expert in it, yet otherwise ignorant, and who operate in a majority of instances with perfect success, cases will sometimes occur that exact all the talent of the veterinarian to conduct the animal with safety through the effects of the operation.

The ignorance of the mere 'gelder' will not be detected till he meet with some uncommon occurrence; and then it is the anatomical knowledge of the veterinarian becomes requisite, and is usefully employed to counteract the mischief of the pretender. The veterinary surgeon can alone be the judge if the state of the animal is favourable to undergo such operation, or whether he should resort to the necessary steps to prepare him for it.

There are some precautions, says Hurtrel d'Arboval, that must not be neglected previous to castration, for the success of the operation greatly depends on them. One of these is, to make choice of a season of the year when the temperature is most equable; and on this account the autumn and spring are preferred.

Care should be taken that the animal to be castrated be in perfect health; and should he have reached the adult period, which often occurs in cases that we have to operate on, either on account of the testicles appearing late, or from other motives, which have justified the delay, the greater must be our precaution. We should likewise keep the animal quiet a day or two before operation, and he should not be subjected to violent exertion; he should be kept on light food—mash diet; and, if of a plethoric habit, should always be bled previously.

Before I conclude these preliminary remarks, I wish to secure attention to the necessity of taking into consideration the collateral circumstances which it is so necessary to weigh well in our minds before we either uphold or condemn any operation of whatever kind.

The usual operation in this country, and which is, I believe, by veterinary surgeons the one most preferred, and the only one that is practised at our college, is by the cautery.

I witnessed a great number of operations performed in this way, in fact I knew but little of any other, before I went to Russia; but I feel no hesitation in saying, that the operation performed by

the actual cautery always induces, more or less, symptoms that often become alarming, and that it cannot be performed on the adult without incurring more swelling and severer symptoms than attend any other method of operation. If I ever use the actual cautery, it is for the sake of expedition, and then only on a yearling, or a two-year old; but I am resolved never to employ it again on an adult.

"Castration," says Hurtrel d'Arboval, "by means of the clams, is the method in general use, if not the only one now employed: it is the most ancient, since it was recommended by Hieroclius among the Greeks. It is performed in two ways—the testicle being covered or uncovered. In the former, the scrotum alone formed by the skin and dartos muscle is cut through, and the testicle is brought out by tearing through the laminated tissue which unites the scrotum with the tunica vaginalis; and the clam is then placed above the epididymis, outside the peritoneal covering, on the cord. In the uncovered operation, the incision is made through the serous capsule of the testicle; the tunica vaginalis being cut through, the testicle presents itself, and the clam is placed well above the epididymis, on the cord. Some persons recommend the epididymis to be left under the clams, with a view of the animal's keeping his strength and vigour: in young subjects this may be done without inconvenience, but in older it is often the cause of mischief. The operation, performed in either way, requires us to provide ourselves with a scalpel, a pair of clams, a pair of long pincers, made purposely to bring the ends of the clams together, and some waxed string. The clams may be made of different kinds of wood, but the elder is nevertheless the best, and generally made use of. To make a clam, we procure a branch of old and dry elder, whose diameter should be about an inch, and whose length should be from five to six inches: of course, the dimensions must at all times be proportioned to the size of the cord we have to operate on. At the distance of half an inch from each end, a small niche, sufficiently deep to hold the string, must be made, and then the wood should be sawed through the middle lengthways. Each end of the clam should be planed, so as to facilitate the opening of them, either when we are about to place them or to take them off. The pith of the wood is then to be taken out, and the hollow should be filled with a paste made of corrosive sublimate and flour, mixed with sufficient water to form it. Some persons are not in the habit of using any caustic whatever, and, of course, the scooping out of the inside of the clam is not necessary: notwithstanding, the caustic, inasmuch as it produces a speedier dissolution of the parts, must be useful, and ought not to be neglected."

I, for one, must beg to differ from this. I have used the clams with and without caustic, and I must say that I cannot imagine, unless it be a very strong one, and necessarily dangerous to employ, that it can be of any use on parts that are compressed, and have neither circulation nor vitality for it to act upon. In the last six cases that I have operated on I have not used any, and the effect has been as equally well produced without it. It is necessary to have a pair of pincers of such dimensions as will enable you to make the requisite pressure in bringing the ends of the clams together; and you will find this facilitated by having the end of them made to fit the outside of the clam, and they should be rough, to prevent their slipping off, an inconvenience that has happened to me several times, not having an expert assistant, and the horse invariably making a struggle at the moment the clams are brought together.

Monsieur Hurtrel d'Arboval further observes, that, having all things in readiness, the subject for operation is to be thrown on his near side, which gives the operator the opportunity of using his right hand more freely. The off hind leg, being drawn up to a side line, must be securely fixed. In operating on a number of horses, we should have men accustomed to the casting and securing them, and the operator attends only to the manual part of the operation.

The latter is an observation hardly necessary for practitioners in this country; at least it has never come under my notice to have witnessed so many to operate on at a time as to furnish such a remark; but in France, where it is proscribed to castrate horses before a certain period, and in Russia, where it is not the custom to perform the operation till after the third or fourth year, men are in the habit of castrating as many as 80 or 100 in a day. I have been informed, that it is the practice to bring young horses of the prescribed age to the fair at Caen, in Normandy, when, if not selected for stallions by the government emissary, they are immediately cut; and in this way a celebrated practitioner, residing in the vicinity, often operates on 800 or 1000 horses in one week.

The horse being secured, and the necessary instruments at hand, the operator, laying hold of the near testicle and drawing it out sufficiently to render the scrotum tense and secure the chord, makes his incision through the scrotum and tunica vaginalis, if the operation be the uncovered one; the testicle presenting itself, is to be cautiously laid hold of by the operator, having given up the knife: at this moment the twitch should be tightened on the nose, to prevent, if possible, the animal struggling: during his effort caution must be used merely to support the testicle, and not to make the same pull on it as when the cremaster muscle is acting. Having

obtained the testicle sufficiently out the abdomen to place the clam, the assistant should do this by opening and putting it on the anterior part of the cord. At this part of the operation the Russians generally cut through the vas deferens, but Hurtrel d'Arboval says nothing on the subject. When the clam has been placed on the cord, the operator, giving up the testicle to the care of the assistant, should be cautious that no parts of the scrotum are included in it, and then take the open ends of the clams in his right hand, having disengaged every thing with the left; the assistant then brings the ends of the clam together by his pincers, taking care to keep them close to the horse at the moment of his struggling. The ends being secured by a double round of string, and tied, the generality of practitioners take away the testicle by cutting through the cord at about the distance of half an inch from the clam. Others allow them to remain on till the clam be taken off, as a matter of security from secondary hæmorrhage.

The clams must have a sufficient degree of pressure completely to stop the circulation in the part, yet not so great as to lacerate the vessels. If pressure be made inefficiently, the animal suffers severely from it; on the other hand, the pressure being properly made, he suffers less than in any other way of operating.

I have seen hundreds of horses, of all ages, cut in this way; and I must confess that my experience is far in favour of its adoption: it certainly produces less pain, the animal loses less flesh and condition, and is sooner recovered than when operated on by the actual cautery.

The covered operation is the one that I am about to advocate, and which differs only inasmuch, that the scrotum and dartos muscle must be cautiously cut through, without dividing the tunica vaginalis. It was a Monsieur Berger, who was accidentally at my house when I was about to castrate a horse, and who, on my saying that I should probably do it with the cautery, expressed his surprise that I should perform the operation in any other way than on the plan generally approved of in France. Being a stranger to it, he kindly consented to preside at the operation, and after seeing him perform on the near testicle, I did the same on the right, but of course not with the same facility as Berger. After opening the scrotum, and dissecting through the dartos, which is very readily done by passing the knife lightly over its fibres, the testicle, and its covering the tunica vaginalis, must be taken in the right hand, while the left should be employed in pushing back the scrotum from its attachments; and, having your assistant ready, as before, with the clam, it must be placed well above the

epididymis and greater pressure is, of course, necessary, as the vaginal covering is included in the clam.

In this way I performed the operation on the horse alluded to: he was seven years old, and I was called to operate on him chiefly on account of disease of the genital organs, or, perhaps, passions I should say, for he was in the habit of making several seminal emissions in the course of the twenty-four hours, and was much debilitated in consequence. The testicles I left hanging under the clams. The horse did remarkably well, never refused his meat, and, in fact, was in better condition at the end of three weeks than he was in at the time of operating. On the third day, the testicles being of a dark colour, and disorganization having evidently taken place, I gently detached the clams, having first cut through the cord at about half an inch below the clam: suppuration established itself shortly, and I never saw an animal do better under the operation. My French friend exacted that the horse should be walked night and morning for an hour at least; and although the rationale of this practice is not so easily determined, yet, knowing it to be an invariable practice abroad, I have always adhered to it.

In Russia, horses are usually cut previously to their commencing a journey of some distance: I have known perhaps two hundred at a certain period removed from one large stud to another, or brought down to St. Petersburgh: the operation is generally performed previously to setting out, and they are made to travel a certain distance night and morning, till the journey is accomplished. At the fair in Caen, the horses, after castration as I have mentioned, are in the same way travelled, by short stages night and morning, to Paris, their owners being in the habit of taking off the clams themselves. Nothing can be simpler than the performance of the covered or uncovered operation. The clams being of a right length and breadth, properly secured, with a sufficient degree of pressure, well placed upon the cord, not too high so as to produce tension, nor so low as to include the epididymis, are circumstances that appear to me to require the most of our attention. On young horses, three or four years old, I had an opportunity of witnessing the operation performed on a great number, by simply scraping through the spermatic cord with a sharp scalpel; the testicle being exposed, was laid hold of by an assistant, while the operator scraped slowly and carefully through the spermatic cord.

I also saw the operation performed on horses of the same age by twisting the testicle off: this was effected by the operator taking the cord between a pair of small clams, at some distance

above the epididymis, and his assistant, accustomed to the method, turned the testicle round several times, till, in fact, the cord was completely twisted in two. No hæmorrhage whatever took place, though the parts were in many fully developed. I recollect seeing my father perform the operation on an old horse. When he was about to apply the actual cautery, the man who held the clams used such force, or was so awkward, that the cord was torn asunder, but no hæmorrhage ensued, contrary to our expectation, for it was in an old but vigorous horse.

Castration performed by ligature seems to be entirely abandoned; and although, perhaps, securing the artery by a ligature, and cutting through the spermatic cord afterwards, would seem to many the most scientific method of performing the operation, yet it must be remembered that this operation on the horse cannot be compared to the same on the human subject, the anatomy of the parts connected with it, and the circumstances under which it is performed, differ so materially. In man, the position of the intestines exacts that the abdominal ring should be so formed as to prevent the descent of the intestines into the scrotum. In the horse, the position of the intestines is so different, that we but seldom hear of a hernia under natural circumstances, although the abdominal ring in him is always large enough to allow of the descent of intestine.

When we consider this circumstance, connected with the unnatural position the animal is necessarily trussed into, to undergo the operation, and the violent efforts of the abdominal muscles, we cannot but perceive what liability there is, in every case, during the common operation, of an irreducible escape of intestine, an accident that has occurred in several instances, to my knowledge, to able practitioners, when fatal consequences were the result. It is a knowledge of several cases that have terminated fatally, through the escape of intestine, and particularly in race horses, that has chiefly induced me to prefer the close or covered operation. Mr. Jewell lost a valuable race horse of Mr. Vansittart's. Crown Prince had an accident of a similar nature occur to him when operated on by a Mr. Atherton, of Liverpool. Mr. Field can best inform you of the case of Leopold, a horse belonging to the late Duke of York; and Lord Kilbourne's Reviewer lost his life last year in a similar way. I performed the operation on three old horses belonging to Mr. Tilbury, without a single untoward symptom occurring. I performed on a young one for Mr. Shackle, on a young one belonging to a Mr. Thompson, on two of his Majesty's young horses, on one of my own four years old, with the same success; and Mr. Sewel, under Mr. Coleman's

direction, performed on a young horse with great success, in the same way.

In all the above-mentioned cases, little or no swelling took place; and so little disturbance, that not one of them, to my knowledge, refused his food or lost condition.

Having related the successful ones, I proceed to mention, that an old practitioner, a friend of mine, operated in the same way, and lost his patient speedily; but I know not the particulars of the case, though I believe it must be admitted, that, at the time, there were a great many horses dying from other causes, and that, in fact, it was a very unhealthy time amongst them. About the same period, I castrated an aged horse for Mr. Elmore, in this method. Three weeks after the operation, when the horse was, as I considered, out of my care, I was called to attend him, and found him labouring under symptoms of violent inflammation, threatening gangrene, with great swelling about the scrotum and cord, extending all along the abdomen of one side, and to the stifle, which all my efforts proved unavailing to arrest the progress of, and he died. I subsequently found that this horse had been put into harness and sold, and had also had an attack of inflammation of the lungs, before the period of these symptoms arrived; that he had been bled twice by one of the grooms, and was considered getting better of *his cold* when attacked in the way I have described. From these circumstances having intervened in this case, I can draw no inference about the operation.

The last time I operated was on a valuable race horse, six years old, and, from some circumstances, the preparation the horse got was quite insufficient to render him fit to undergo it. The plethoric habit of a race horse, that has been living upon hard meat, and galloping exercise, for four years, is not to be reduced, or sufficiently lowered, by one or two doses of physic and a fortnight's abstemious diet, to render the operation wholly without danger. This horse had been physicked, but his muscles were still in all their vigour, and his habit as inflammatory as every horse's under similar circumstances must be. The horse was a valuable one: I adopted the close method, and the operation I performed with every care. My patient had been living on mashes only for three days previous. After the operation, he was walked about for two hours, and then put into a loose place, with a cradle on, to prevent his getting his teeth to the clams: he expressed no pain, but ate his mashes, and was walked again the same evening (Monday). He was, to appearance, perfectly well on Tuesday. Towards Wednesday, however, he evinced some pain, by looking back at his flanks, which I should not so much have re-

garded, but that he refused his food, and that his pulse got up to between 50 and 60. I therefore bled him, and took away five quarts before the pulse was lowered. I administered a clyster, and left him for the night. The next morning I was called up at five to attend my patient, when I found him in the greatest agony, rolling about the box, chiefly lying on his back; pulse full and hard, and breathing very laboriously. Conceiving that I might have placed the clams on the cord too high, so as to produce tension, I began by taking off the testicles, and then the clams, but this I found gave no relief; on the contrary, the symptoms were all getting worse, and I bled him a second time, to the amount of five quarts. I kept his belly constantly fomented, and gave him half a pound of Glauber's salts in some gruel, and repeated the clyster. At twelve the same day, finding the horse evidently worse, and his pulse still hard and full, I bled him again to four quarts, and gave him one drachm of opium and calomel combined. The enema was repeated, and at six I bled again to three quarts, and gave two scruples of calomel and opium: the fomentation of hot water was constantly kept to his belly. At twelve that night I bled to two quarts more, until my patient's pulse was hardly to be felt. He staggered across the box: his pain, however, appeared somewhat relieved, and I placed half a drachm of opium in the rectum. On the Thursday morning I found him, at half past four, much better, his pulse tranquil, about 52, expressing no pain, and his appearance much improved; but he had still a slight catch in his breathing: however, my friend, Mr. Bloxham, who kindly came from Windsor to assist me in treating the case, arrived about eight o'clock that morning, and we were both of opinion that the horse was doing well. His body not having been opened all day, we thought it advisable, in the evening, to give him four drachms aloes. On Friday, Mr. Bloxham, conceiving the horse out of danger, had left me: he became restless again, and his pulse as full and hard as on the first day of his illness. I immediately took four quarts of blood away in the evening, and gave him two drachms of aloes, and clysters every three hours.—Saturday, body open, pulse relieved, 48; belly still fomented; suppuration not established in the parts, but altogether the horse seemed doing well.—Sunday, the anxiety expressed, and the restlessness hardly amounting to pain, yet indicating that all was not right within; and knowing that chronic peritoneal inflammation sometimes establishes itself, it induced me, after trying, ineffectually, topical bleeding, to insert two large setons on each side of the abdomen. The body was open, and the horse picked green meat: the parts began to suppurate, and from this period he did well.

The symptoms that I have traced will indicate to you that

peritoneal inflammation must have commenced, but the quantity of blood taken from the horse clearly proves that he must have been in a state of extreme plethora, or he could not have stood the loss of nineteen quarts of blood in twenty-four hours. It was likewise evident that the horse was not in good condition at the time, for he voided great quantities of worms and the places where he had been bled, all six of them, instead of uniting by the first intention, suppurated, and formed as many small abscesses. Our Fench brethren are often in the habit of applying leeches and cupping-glasses; and I have no doubt that they may both in their turn be made use of. From their own account, cupping with very large glasses is a common practice with them, and I must say, I cannot see why it should not prove so here.

We are all of us, in our turn, equally likely to form erroneous opinions; and I am aware that having been the first to perform the operation, I, in some measure, am the more likely to have been led astray in my notions of it; yet I must conclude by saying, that I prefer it still to all others that I have practised, notwithstanding the following quotation from the elaborate French author's Dictionary.

"Castration, by the close operation, is more expeditious, and for this reason is, no doubt, preferred by a great many practitioners. This method has its advantages as well as disadvantages. It is less painful, and does not expose the animal to a hernia, which is but of too frequent occurrence in well-bred horses, that are consequently irritable, and make violent efforts during the operation. It facilitates the placing of the clam well above the epididymis, a circumstance that is important, for pressure on it is almost sure to produce subsequent disease in the cord. On the other hand, this operation is more liable to be the cause of tetanus, and of peritoneal inflammation; and the substance of the cremaster muscle prevents the compression being made effectually. Nevertheless, we find practitioners who, having operated in this manner, and without accident, upon thousands of horses, according to their assertions at least, do not hesitate to affirm, that castration by the close operation is less dangerous, and merits the preeminence which their experience accords to it."

I have translated this passage literally, and when I reflect that it emanates from a most distinguished French writer, who has canvassed the opinions of the majority of French practitioners for his work on this, as well as other subjects, and that he rather inclines to the preference of this operation, I begin to feel my own favourable opinion of it more and more confirmed, and attribute to my inexperience in the method of the operation those unfortunate occurrences which happened to me in cases that I have related.

I cannot imagine why tetanus should occur more frequently after the covered than the uncovered operation, and pressure certainly may be made as efficient, if our instruments are well adapted for the purpose, in this operation as in the other; for, in fact, there is but one objection that, I think, has the least foundation for our consideration, or rather our experience, which is the statement that peritoneal inflammation is often the consequence of it.

It may be a long time before this operation will be as frequently performed here as the old one, with the actual cautery; but I feel convinced that its superiority is only necessary to be known, to make it as generally practised as it is on the continent.

TWO CASES OF CASTRATION.

By Mr. W. PERCIVALL, *V.S.M. R.C.S.*

IN January, 1821, I purchased a stallion ass for the purpose of experimenting on the operation of castration.

On the morning of the 15th of the month, about 11 o'clock A. M., having cast and bound the animal, I made an incision on one side of the raphe of the scrotum, as in the ordinary mode of operating, through the skin and external vaginal covering, and let out one of the testicles. I then placed flat against the sides of the chord two pieces of elder, of convenient length, and about half an inch in breadth, into which, in place of the pith, I had previously introduced a paste composed of potassa fusa and soft soap, and confined them, in the usual mode, by ligatures.

The animal was now suffered to rise, which he instantly did, and afterwards walked into the stable with all apparent freedom from pain, or even inconvenience. Shortly afterwards, the testicle became cold; but he kicked, if it was much handled.

In the space of three quarters of an hour afterwards, on examining the testicle for the second time, I was rather surprised at its falling off and dropping into my hand: the separation I found had taken place above the clams, and seemed to me, at the time, to be evidently the effect of the virulent caustic I had employed. The separation of the organ was followed by quick droppings of blood of the arterial character, which I had no doubt came from the chord. Four hours afterwards the hæmorrhage had ceased. Towards evening, some trifling tumefaction of the scrotum was discoverable, but the sheath of the penis was the most swollen, and had an œdematous feel.

16*th*.—The swelling of the external parts has not materially increased. The animal was led out for half an hour.

17*th*.—Exercised twice during the day. After the second ex-

ercise, in the afternoon, all the external swelling had entirely disappeared. A serous issue, tinged with blood, drops from the opening. Nothing medicinally has been done.

18*th.*—Going on well.

20*th.*—Some swelling under the belly has made its appearance. Capiat. statim. aloës ʒvi. in bol.

21*st.*—Purged towards evening. Swelling abating.

22*d.*—Has been purging ever since. For the first time, he evinces dullness, and is off his appetite. The swelling under the belly pits deeply.

23*d.*—He still purges; eats very little; has been lying down the greater part of the time since yesterday, and now cannot be made to rise up. Pulse not much quickened, but is small and weak. Sumat. opii pulv. ℈j. c. cretæ pulv. ʒſs. Two hours after he had taken the ball, I found him risen up of his own accord, and eating his hay.

24*th.*—Alvine excretion of the consistence of cow's dung.

25*th.*—Passes nothing. Fever approaching. Appetite lost. Pulse quickening. Restless.

27*th.*—Yesterday was worse. To-day, he died.

On examination.—No peritoneal inflammation. Mucous surface of the intestines reddened, and containing a purulent fluid, mingled in places with some blood. The chord was greatly enlarged in volume as high as the ring; and there the closure of this opening, by adhesive matter, seemed to have set limits to the morbid action.

Castration succeeded by Farcy and Glanders.

In May, 1823, a three year old colt, the property of Mr. L——, of Eltham, was cut in the ordinary manner, with the actual cautery, by my father. The day following the performance of the operation, ʒ ſs. of aloes was given, but it took no effect. On the fifth day after, ʒvi was given, but also without effect. The external swelling has hitherto been confined to the scrotum, which is about the magnitude of a small bladder.

Two days after this, our attention was drawn by the groom to some pimples, perceptible only to the feel, upon the outer side of the near quarter: they form a connected chain, running in a semicircular course from above and behind the stifle towards the posterior extremity of the buttock. Next day (the 8th), the lumps have become visible from increase in size. The colt walks lame on the affected limb, the fetlock joint of which gives a loud snap at every step he takes. The holes in the scrotum were opened with the fingers: that on the affected side emitted about two ounces

of thin purulent matter. The swelling is extending along the belly from the scrotum.

10*th Day.*—Similar knotty tumefactions have made their appearance from the other hind and both the fore limbs, and also upon the head and neck; all the limbs have become swollen, but most of all the off hind, to which now the lameness is transferred. He has commenced emitting purulent matter from the nostrils. His appetite has not been much impaired, although irritative fever has been and continues to be a concomitant of these unfavourable eruptions. He has been briskly purged, and daily exercised for two or three hours.

On the 26th day after the operation, he was destroyed, in consequence of his hopeless condition, in the last stage of farcy, coupled with glanders.

SUBSTANCE OF AN INTRODUCTORY LECTURE ON THE ANATOMY AND DISEASES OF CATTLE, SHEEP, SWINE, DOGS, &c.

By Mr. YOUATT.

IN the best ages of Greece and Rome, the veterinary art was held in that estimation which its utility and importance merited. The practice of it either formed a distinct division of the medical profession, and was embraced by those who occupied no mean station in the society and literature of the times, or it formed a part of the duty of the human physician. Xenophon, the favourite disciple of the wisest of the Grecian sages, and the leader of the ten thousand, disdained not to employ many of the hours of his honourable retirement in writing on the management and diseases of the horse; and Hippocrates, the father of medicine, condescended to treat on the veterinary art. Until the irruption of the barbarians, and the destruction of almost every record of knowledge, the practice of veterinary was reckoned second only to that of human medicine.

When the night of darkness produced by the ravages of the northern hordes began to pass away, and other professions vindicated their claim to attention and respect, the veterinarian remained degraded and despised. A change had taken place with regard to some part of the treatment of the horse. Shoes of iron had been attached to his feet. These were manufactured and applied by rude and untaught mechanics, who, from this occa-

sional employment about the horse, had gradually obtained the sole management of him.

The farrier, for such was the name by which he was designated, from the metal on which he worked, had totally usurped the place of the veterinary surgeon; and, with a wrong-headedness scarcely credible, had, both in principle and in practice, discarded almost every thing that was valuable. His skill consisted in the performance of a few cruel and butcher-like operations, and in the possession of prescriptions, ridiculous, unchemical, injurious, and which were employed empirically and blindly in every ailment and in every stage of disease.

The treatment of cattle and other domestic animals was consigned to the shepherd and the herdsman, few of whom could read or write, or it was adopted by a nondescript being yclept a cowleech, and proverbial for his ignorance and barbarity.

At length the light of knowledge began to dawn on this worse than Cimmerian darkness. Several continental states established schools for the education of the veterinarian, and, thirty-eight years ago, Mr. John Hunter and Mr. Cline laid the foundation of the college at St. Pancras.

From that period the character and condition of the practitioner of veterinary medicine has gradually and materially improved. The rank of commissioned officer, when appointed to a cavalry regiment, has given him a station in society to which he did not before dare to aspire; and many veterinarians have obtained the confidence of the public by scientific attainments and honourable practice. Much has been done, but all has not been accomplished which the excellent founders of the veterinary school had expected.

During the last thirty years, what a dearth of good or even tolerable veterinary publications have we? About that period we had the very ingenious and splendid work of our professor on the foot of the horse, but to this succeeded a long and dreary waste,—a second night of farrier's darkness.

Of those who are gone, we have Mr. Peall's "Lectures," rich in sound principle and scientific practice, but in which precision is sometimes sacrificed to the imperfect comprehension of the amateur.

Of living writers we have Mr. Richard Lawrence "on the Structure and Œconomy of the Horse," excellent so far as it goes, and holding out the promise, unfortunately for the author and the profession not accomplished, of something better hereafter.

Mr. Goodwin, sen. on the foot, contains a fund of information on the œconomy of the foot, and the history and principles of shoeing.

Mr. Bracy Clark has favoured us with several pamphlets on

detached subjects, and some of them highly valuable; but we look to that gentleman for a more connected and complete exposition of veterinary science, and somewhat freed from too acrimonious personalities, if he would fully establish his claim to our gratitude.

Mr. Blaine has given us his "Veterinary Outlines," to which for many a year the pupil was solely indebted for all he knew of the anatomy of the horse, while, strange to say, they who owed most to him, would not acknowledge him as a member of the profession. Posterity will do justice to this, or rather the general voice of veterinary practitioners has already done it.

Last, and not least, we have Mr. W. Percivall, whose "Lectures" are admirable in their present form, and the harbingers of a yet superior work, creditable to himself, and the profession to which he belongs.

From the following we must not withhold every meed of praise, although they have not added much to our literary reputation or professional knowledge. White, excellent in his account of symptoms, but who degraded himself by catering for the groom;—Causer, who promised a scientific development of veterinary pathology, but who has given us little that is new, except a recommendation of sulphur as almost a specific for numerous diseases;—Wilkinson, with a most extraordinary and unparalleled list of successful cases of tetanus, by the use of opium, camphor, and assafœtida, and a novel mode of treatment of epidemic catarrh by the delivery of a nitre ball between the grinders;—Rydge, with his "Vade-mecum," a sketch of the causes and symptoms of disease, and the best approved formulæ for every case, but which should be contained in the veterinarian's head, and not carried in his pocket.—The only "vade-mecum" should be experience, founded on honest and diligent study; every thing else will deceive and disgrace us.—Peck, giving the whole of the Veterinary Materia Medica, the anatomy of the abdominal viscera of the cow, and the symptoms and treatment of every disease of cattle, in 150 loosely printed pages.

As for Knowlson's complete "Horse and Cattle Doctor," with his "prescriptions worth ten guineas each, and new to the world;"—Clater's "Every Man his own Farrier and Cattle Doctor;"—and "Hind's Veterinary Surgeon," a name assumed by some garreteer compiler, and one of the most impudent specimens we have on record of the abominable art of book-making,—these constitute the ridicule of the continental schools, and the disgrace of ours.

In what estimation is the art held by the public? If a young man, with little introduction, settles in a country place, with no brother veterinarian in his immediate neighbourhood, and opposed only by untaught farriers and cow-leeches, will he gene-

rally succeed? Will the diploma of a veterinary surgeon bring him practice? Will the farmer leave the smith, or the gentleman cease to confide in the skill of his groom? Let those, too numerous, whose sanguine hopes have been disappointed, answer the question! Let those who, having left the college, have sunk the greater part of their little patrimony, and then abandoned their profession, or mingled with it something incompatible or degrading, answer the question. I adopt the language of a recent veterinary periodical: "In what racing stable is not the "veterinary surgeon, if he be even admitted there, a mere "cipher, compared with the training groom? In what sporting "establishment is he suffered to have a voice, if it be opposed to "that of the huntsman, the groom, or the amateur? In how few "instances does the title of veterinary surgeon obtain admission "to the presence of the nobleman or the gentleman, unless it be "the pleasure, or answer the purpose of the groom or the coach-"man that he should be admitted? What town is there in which "the uneducated farrier, or the practitioner without a diploma, "does not rival, and frequently beat, the graduated veterinarian?"

There must be some cause for this. Neither in the natural nor the moral world is there any effect without its cause. The young veterinarian has not the confidence of the country; and he has it not, because he has been too frequently weighed in the balance and found wanting. What is the cause of his deficiency? One cause is the strangely limited time appropriated to the instruction of the veterinary pupil. The candidate for the diploma of a human surgeon must have served a certain apprenticeship or pupillage to a medical man. He must have been long accustomed to medical subjects and medical inquiries; he must have formed habits of medical conversation and medical thought. He is, after that, compelled to pass two winters in the metropolis, to build some superstructure of science on the foundation which had been thus laid.

Far different is it with many veterinary students. They come from the shop-board, or the mechanic's desk. They bring not with them this all-important previous preparation. They enter at the college; they pay the usual fee, and they attend on the lectures of the professor. He addresses them—he must do so—in a language strange and unintelligible. They understand not, at first, the meaning of some of the most common terms which he uses. They have no data deeply impressed on their minds as landmarks, by which they are to steer their course through the too often bewildering paths of medical science. They listen with mingled pleasure and wonder. An indistinct and often erroneous impression is made on their minds. Forgetfulness rapidly suc-

ceeds to confusion, and, in a little while, almost every trace of valuable impression is obliterated. Weeks and months pass away in this unimproving state. At length light *begins* to dawn upon them, and the path they have to tread gradually opens to their view; but the diminution of their little purse or the impatience of their friends warns them away. They hastily prepare for an examination. They get by rote certain answers on certain points, and the youth, who, six months before, knew not a cartilage from a tendon, is dubbed a veterinary surgeon, and sent into the world with licence to kill or cure.

The first professor of the Veterinary College was wont to address his pupils in the following language. "The veterinary art "is a branch of general medicine; and the same paths which lead "to a knowledge of the diseases of man, lead equally to those of "brutes. An accurate examination of the parts of animal bodies, "a studious survey of the arrangement, structure, form, use, and "relations of these parts, and of their laws of action, and also of "the nature and properties of various remedies, these constitute "the only foundation of medical science. It is evident, therefore, "that the branch of medicine styled veterinary, *requires an extent "of knowledge equal at least with any other branch,* and the vete-"rinarian is, in very many instances, obliged to engage in more "minute researches, and in longer and more laborious inves-"tigation, for his art comprehends the cure and preservation "of every kind of useful animal. And when the patients of the "veterinary surgeons are dumb, he must have an accurate and "quick eye, and ready penetration, and sound judgment, and "long-confirmed experience, who can with a degree of certainty "determine the existence of particular diseases, their causes, seat, "state, and progress, and derive from symptoms so closely re-"sembling each other the proper inference, and anticipate the "issue, and hasten to avert it. No one, therefore, can be so ab-"surd as to imagine that it is possible, without previous and long "study, and a due course of investigation and experimental know-"ledge, to become a veterinary surgeon."

Such was the language of St. Bel. It was that which Hunter and Cline approved, and it indicated a course of study which would have well accomplished the objects of the institution.

On what ground the language of the present professor should be so different, or by what means the governors of the college were or could be taught to believe, that the diseases of the horse were few, and easily understood, and more easily treated—and that the horse was the only subject of the veterinarian's attention, the only subject worth a lecture—and instead of the three years appointed by the medical luminaries of that day, five

months are now sufficient to enable the barber, the tailor, and the shoemaker, to practise the veterinary art in all its branches—who permitted one practitioner to write over his infirmary, "horses Skillfully treated When diseas'd," or another to inscribe on his residence "Mutton-pie-maker and Veterinary Surgeon," by what strange and incomprehensible delusion all this was effected, I will not now inquire.

The cause of the incompetency of the veterinary pupil with which I am at present most interested, is the lamentable curtailment in the objects to which his attention is directed.

St. Bel stated, that "the art of the veterinary surgeon com-"prehended the cure and preservation of every kind of useful ani-"mal;" and so says the prospectus of the veterinary college, even that of the present year: "The grand object of the institution has "been, and is, to form a school of veterinary science, in which "the anatomical structure of quadrupeds of *all kinds*, *horses*, "*cattle*, *sheep*, *dogs*, *&c.* the diseases to which they are subject, "and the remedies proper to be applied, might be investigated and "regularly taught, in order that by this means enlightened prac-"titioners *of liberal education*, whose whole study has been de-"voted to the veterinary art in *all* its branches, may be gradually "dispersed over the kingdom, on whose skill and experience *con-"fidence may be securely placed.*"

St. Bel had no experience on the diseases of any quadruped except the horse, and he was cut off before he could acquire it. The present professor, when he accepted the chair, had no experience. No animals, except horses and a few dogs (sixteen, I believe, in the last year) are sent to the veterinary college; consequently no experience on the treatment of their diseases could be acquired, and the professors are too candid, as well as too politic, to profess to teach that which they had no opportunity to learn; therefore of the diseases of cattle, sheep, swine, dogs, scarcely a word is heard at the veterinary college.

This is undoubtedly to be lamented. It is altogether departing from the original object of the institution, and it is rendering the education of the veterinary pupil sadly deficient.

To supply this deficiency, the present lectures are attempted. My humble and subsidiary school will be devoted to those subjects, which were not intended to be, but which are utterly neglected at our principal seat of learning.

I come before you with no hostile spirit towards others, nor with any spirit of rivalry: I know myself too well for that.

What are my qualifications? A practice peculiar in this country, but not in any other;—reckoned, or attempted to be represented, as somewhat degrading here, but elsewhere accounted

the proper extent and the perfection of the veterinary art: a practice which has frequently brought under my notice the maladies of most domestic animals, and occasionally of all. It will be for you to judge how far these opportunities have been improved, and how effectual may have been that stimulus, which has for many a year exerted its influence on my mind, to obtain my best revenge on those whose ill-concealed or open sneer was meant to but could not wound; whose affectation of superiority could not humiliate, whose persecution could not destroy, by shewing that the *dog-doctor* could render important service to the veterinary art, and that service which they had not the power to afford. If I were ever so fortunate as *thus* to heap coals of fire on their heads, what would I do? why, banish all animosity, and unite with every one who had at heart the improvement of our profession.

In every country but England, the term veterinary surgeon indicates a person who has studied and practises on all the animals that have been subdued by or rendered useful to man. In France, a large farm is attached to their schools. Flocks of sheep and herds of cattle are kept, that the student may learn the proper management of them when in health, and their treatment under disease.

In the account of the proceedings of the veterinary school at Alfort, during the year 1826, two cats are described as having been received and cured; and I am not ashamed to say, that the account of my little practice, during the present year, would include the horse, the ox, the sheep, the swine, the dog, the goat, the cat, the monkey, the fowl, the parrot, the starling, the blackbird, and the canary, and, if I went back a year, I might add the lion and the boa constrictor. And why *should* I be ashamed of it? Are they not susceptible of pleasure, and conscious of pain? Is it any degradation to add to the sum of happiness, or lessen that of misery? It is false pride which would associate the loss of dignity with contributing to the enjoyment of the meanest creature. He thinks not so who is highest and best, and without whom not a sparrow falleth.

In the United Kingdoms, there are probably about one million and a half of horses used for agriculture, commerce, or pleasure; but there are five millions of neat-cattle, four millions of swine, thirty millions of sheep, and two millions of dogs. Is it not absurd that on this one million and a half of horses the whole attention of the veterinarian should be lavished, and not one solitary thought, during the whole period of education, be bestowed on the other one and forty millions of valuable and useful animals? Is it not absurd that fifty students annually should be sent into the

country, instructed in the medical treatment of the one million and a half, and no professor appointed, no surgeon educated, for the forty-one millions; nay, that they should not be deemed worthy of a single lecture, although they constitute the very wealth of the kingdom? They are subject to disease; the dog far more so than the horse. The ox has the hoose, and the murrain, and the blood. Three sheep in every hundred are supposed to die annually of the blood alone, three of the rot, and, if we reckon but two for all other diseases, eight in every hundred are annually lost to the farmer; and three millions sterling are, in the mortality of sheep alone, to be annually subtracted from the property of the agriculturist and the riches of the state.

I will not say that the best instructed veterinarian would save to the grazier the whole or the greater part of this immense sum; but if the medical treatment of our domestic animals were undertaken by those who had studied their anatomy, œconomy, and diseases, much good would inevitably result.

The Veterinary College has done much to ameliorate the condition of the horse. Other domestic quadrupeds have an equal, and, in point of value, a superior claim on the attention of the professors and governors. The time, I trust, is not far distant, when they will feel this, and make the veterinary school that which the interests of the student and the state equally and imperiously require. Until this be the case, I am encouraged to attempt, and with your support shall continue, a course of lectures on the structure and maladies of these neglected but valuable animals. I never met with a veterinary surgeon in the country who did not express his deep and bitter sense of the inconvenience he had felt and the loss he had sustained, both in reputation and emolument, from being sent into life ignorant of that which necessarily formed a part, and, if he had had sufficient preparation to encourage it, a very important part of his practice.

(To be continued.)

THE LETTER FROM "NON-ELIGIBLE" TO SIR ASTLEY COOPER, BART.

(Continued from page 321.)

I CONCLUDED the former part of this letter to you, Sir Astley, with stating, that the examining board being called on by the governors of the Veterinary College for an official report on the expediency or utility of admitting veterinary surgeons into the

committee, return for answer—"That a law of the Veterinary College limits the examining committee to those who deliver or have delivered lectures on subjects connected with the veterinary art; and the committee do not see that any alteration of this law is at present necessary." This is the reply you make us in the current year. On a former occasion, in the year 1823, I beg to remind you, that, on the same proposition being submitted to you, you answered us as follows:—"That, by the existing laws of the institution, the medical examining committee are precluded from making any alteration in the constitution of their board; and that as medical science has, for thirty years, eminently flourished under the present system of education and examination, the committee are decidedly of opinion, that they cannot with propriety recommend to the general meeting of the governors of the college the adoption of the alteration you propose, as they are persuaded it would not tend to promote either the reputation of the college or improvement of the pupils."

Thus it appears that, in 1823, you tell us *our services are not required;* and five years afterwards inform us, that, even were they desirable, we are ineligible as examiners, from the circumstance of our not being lecturers "on subjects connected with the veterinary art." If you felt satisfied with the truth and justness of your first report, why abandon it for an old and (as I shall presently show you) now obsolete law of the college?—a law of whose existence you would all of you have remained ignorant up to this very moment, had not ——— *accidentally* discovered it again; for even he himself had long lost sight of it.

Since you have relinquished the reasons you assigned for excluding us in your first report, by adopting fresh and altogether different ones in the report for the present year, I do not feel myself called on to make any comment on the former; I shall, therefore, pass on to the further consideration of the latter.

Pray, Sir Astley, do not suffer your reason to be so fettered, as for a moment to imagine that this "law" (although it most assuredly does stand in the college book of regulations, like some others now equally dormant) was ever intended to have any relation to the present times and circumstances! No more was it designed for operation *now,* than the laws of your own profession about barber-surgeons. It was enacted at an epoch when the veterinary profession was just emerging from the most abject condition of servility and ignorance; when no veterinarian, among the few that existed, could be found anywise qualified for such a post as an examinership. Under such circumstances, its beneficial effects became manifest; for, had not the governors passed such a law, the consequence must have been, as they sagaciously foresaw, that the veterinary pupil would have been launched

into practice without any professional attestation of his qualifications whatever. The governors, therefore, I repeat, said, "We will form an examining committee, by admitting the eligibility of any persons *who deliver or have delivered lectures on subjects* CONNECTED WITH the veterinary art." Did not a candid unbiassed inquiry into the origin of this law satisfy one of its plain and honest interpretation, I might direct your attention to the very *wording* of it—"*connected with* the veterinary art"—in further confirmation of the truth of what I am now urging.

Now, Sir Astley, that we have got thus far with our disquisition, I am going to request a small favour of you; and that is, that you will put the question *to yourself*, whether you ought to countenance the revival of such a law?—a law by circumstances rendered obsolete;—a law that by contortion and wilful misinterpretation alone can be applied to us at the present day;—a law that must, after all, fail in effecting what those who revised it have evidently in design, viz. absolute and unconditional exclusion of us, inasmuch as it is one, as I observed in the former part of my letter, "that any ignoramus, or any blackguard might conform with, and yet remain as unfit as ever to become an examiner." If, on asking yourself this question, you feel a responsive "Yes," I will lay down my pen, to resume it no more in such a mistaken cause; but whilst your worthy and excellent heart beats in opposition, as I feel certain it must, to what you are here doing, purely, I believe, *through friendship*, so long shall I feel it my duty, respectfully, but firmly, to reason and remonstrate with you.

I find, on perusing the Report* again, the following remark of the committee, affixed to the tail of the "law:"—"And the committee do not consider that any alteration of this law is *at present* necessary." Do you know, Sir Astley, that I have a strange conceit that this dear redeeming adverb was inserted by *you*. I am sure you are at heart the veterinarian's friend. Methinks, while the report was penning, that you felt a little misgiving—a passing twitch or two about the *scrobiculus cordis*, and that you ran instantly to the secretary, and begged the interposition of the precious saving clause—"*at present* necessary." Cheer up, my brethren: our case is not so hopeless as we had imagined.

But, let me ask you, Sir Astley, why not *at present?* Where or what are the objections or obstacles? We have at this present day many individuals among us (and I proclaim it with professional pride, and will at any time throw down my gauntlet as their champion), who, although not Sir Astleys in point of emi-

* Contained in Nos. 6 and 7 of "THE VETERINARIAN."

nence, may raise their heads upon a level with their cotemporary surgeons, on the score either of professional knowledge or private respectability. We have several gentlemen among us who are by education human as well as veterinary surgeons—members of the college in Lincoln's Inn Fields, as well as of the more humble one at St. Pancras. We have one gentleman who was apprenticed to the late distinguished successor of John Hunter, Mr. Wilson, at a very high premium, and who, on account of his medical attainments, was taken by the hand by Mr. Brodie, and is now, for the same reason, associated with him and other eminent metropolitan surgeons. We have another, who studied two years at St. Thomas's Hospital, who was a cotemporary pupil with Messrs. Key, Morgan, and Bransby Cooper, but who, because he has since he became a surgeon, with pretensions equal to any possessed by those gentlemen, devoted his time to the study and practice of the veterinary art, is *not eligible* as a veterinary examiner, whilst the very next election will probably bring into that situation one of those very persons, his three old cotemporary hospital pupils !* If, Sir Astley, there is common reason or common justice in all this—if you will persist, in the face of such noonday conviction, in proclaiming us as unfit to examine students in that art which is exclusively ours, because we alone possess the knowledge to practise it, then you are not the man I take you to be, nor are you the man you formerly were.

When I cast my eye, Sir Astley, over those paths by which you have, step by step, worked your arduous way to the pinnacle of fame and fortune—when I recollect what you were, and behold what you are, and then withdraw within myself for a moment to reflect on the means through which you have been enabled to arrive at so great an end, I can hardly dispose myself to think that it is you who have been "mainly instrumental" in heaping obstacles in the path of the humble but deserving veterinarian. You may well imagine, when I see so great and so good a man, as I have always regarded yourself to be, busy at such ignoble work as this, that my mind begins to misgive me, and I apprehend that I have been deceived, or (what I would be inexpressibly rejoiced to find was the case) that *you* have. I say, I should be exceedingly rejoiced at this, because I feel convinced that the bandage would no sooner be taken from your eyes, than reason would again enlighten them, and prompt you to hasten to obtain us that redress which delusion had persuaded you until that moment was neither merited nor required.

* I do not bring forward these two cases to the disparagement of many other equally, and perhaps more meritorious individuals in the profession; but because they in particular bear well on this part of my argument.

In the course of the conversations which I have had from time to time with those who have been concerned, and I feel I may add, *principally* interested, in this "exclusion," I have had it put to me,—what interest the medical members of the committee could possibly have in taking upon themselves the trouble and responsibility of such an office, other than that which tended to the general good of the veterinary profession? "Surely," said one advocate, "you cannot for a moment suppose that the fee paid for the diploma is a consideration: and the name of a *veterinary* examiner confers no honour upon surgeons so eminent as these are in their own profession. What other motive, then, can any one conceive such men to have, in either accepting or retaining their places, than *your* professional advantage?" My adversary, in this instance, has intrenched himself in such a formidable position, that, were the ground sound upon which he stood, I should begin to despair of victory; the ground, however, is rotten—so rotten, that it will not even bear being turned up for examination.

I am told that it is impossible that *the pecuniary advantages* of the office of examiner can be an inducement. I do not mean to affirm that they are, either abstractedly or in the main; but I mean to contend, that if half-a-dozen individuals of the same profession, whom no other business, perhaps, would bring together, can have a good dinner provided for them on half-a-dozen occasions every year, and, at the end of the season, receive a score, or even a dozen pounds each, into the bargain; I say, I mean simply to contend, that (as it is taken care that these calls do not in any way interfere with their professional concerns, and as their attendance is perfectly optional) the vocation is by no means an *unpleasant* one; and so far, and no farther, makes the office desirable. Every pupil, at the time he receives his diploma, pays, in consideration thereof, £3..3*s*. The number of veterinary surgeons created in one year may, at the present rates, be computed at forty, or from that to fifty; making, on an average, the sum of about £140, to be annually divided, dinners included, among half-a-dozen of the examiners, that being the average number present on the committee, and the absentees receiving nothing. If you would have me view the affair in a different light, is it not a pity, Sir Astley, that this sum, which really degenerates into a paltry consideration, after the dinners have been paid for out of it;—I repeat, is it not a pity that the balance could not be appropriated to some purpose for the improvement of that profession, *for whose good* you and your committee are now compelled to share it, and to put it into your pockets? Surely, Sir, this hint can only require introduction among the examiners to be

taken into serious consideration ; and I should hope that we may rely on you to take an opportunity thus far to serve us.

In regard to any honour which the post of a *veterinary* examinership may confer on any medical member of your committee, or in respect to any other advantages derivable from the office, I may observe, generally, in the first place, that all men are ready enough to receive and cling to that which invests them with authority, though it be but "little and brief;" that, in other words, it seems natural to us to love to lord it over one another : and, in the second place, that it seems to be equally in our nature to like to hear the world giving us credit, not only for a great deal more knowledge on certain subjects than we really possess, but for knowledge even about that of which we are consciously quite ignorant. For example, it is said, Sir Astley, that the world will give me credit for more science, because your name is subscribed to my diploma ; in which case, how much more must your veterinary reputation become enhanced ! I have, however, in a former part of my letter, given it as my opinion, that the appearance of your signature, in quarters where it is to our interest that it should make most impression, is likely to have the contrary effect ; and thus far, it casts a reflection upon the veterinarian ; though, still, it may prove, even if only by way of advertisement, of some service to the medical examiner.

But I will suppose, Sir Astley, indeed, I would fain believe, that neither you, nor any member of your committee, is influenced by any such sordid feeling in this exclusion : does, therefore, the inference follow, that you are acting *purely* on account of us—that you can have, neither directly nor indirectly, any selfish motive whatever for retaining your places ? Far be it from me to be suspicious of the presence of intrigue in minds at once so enlightened with reason and fortified with independence, that they seem to have no place for "the lurking devil ;" it is only my sad experience which makes me feel certain indescribable misgivings, when I view actions, said to be disinterested in their origin, turn out otherwise in their operation, and persisted in after their injurious tendency has completely manifested itself. I will not here press too hard, Sir Astley ; but I feel quite confident I shall, in the end, find some *secret spring at work*, impelling you onward so *disinterestedly* to our disadvantage and degradation. Let us look a little closer on this part of our subject.

I presume, Sir Astley, you will agree with me, that we all of us have some observation and experience, that in committees and assemblies in general, of whatever description, from the Houses of Lords and Commons down even to a vestry meeting, there are always to be found one or two of the members, or a certain com-

paratively small number of the whole, who take what is called "the active part" in the proceedings, and who may be said to constitute *the effective committee;* the others either being totally indifferent about transactions for which they are, nevertheless, to bear their due share of responsibility, or else, being so influenced by their respective leaders, as seldom or never to bring forth any opinion of their own.

The examiners assembled for the specific purpose of taking into consideration the propriety, expediency, utility (what shall I term it ?) of admitting veterinary surgeons into the committee for examining veterinary pupils, were, as you know, Drs. Babington and Geo. Pearson, Messrs. Charles Bell, Brodie, Green, Coleman, and Sewell, and yourself, Sir Astley. On reference to the report of this proceeding (vide page 244, No. 7 of the Veterinarian), we find it stated, that "Drs. Babington and Sir A. Cooper delivered their opinions, at considerable length, against the addition of any veterinary surgeons to their committee; and it was decided (we are not told whether unanimously or by what majority) that "a law of the Royal Veterinary College," &c. &c., as heretofore reiterated. —Apprehensive, however, Mr. Editor, that I am encroaching too much on your columns, I shall here break off, leaving the examiners in council until next month.

I am your obliged servant,
NON-ELIGIBLE.

INFLAMMATION OF THE BOWELS.

By Mr. J. LEAVER, *Willingdon, Sussex.**

I WAS sent for, August 22, 1828, to look at a pony of Mr. J. Noakes, which was said to have the gripes: I saw it in about an hour and a half after the message arrived. They were giving it gin and pepper and beer. As I had no doubt that ente-

* We have very great pleasure in inserting this case. Mr. Leaver, although destitute of a college education, is an accurate observer, and, we doubt not, a judicious practitioner. He modestly tells us, that "it is the least in his thought that what he writes should find a place in our work:" but although he merely asks us some questions respecting the case, we insert it at length, for it is well drawn up; and we would convince Mr. Leaver and our brethren generally, that it is our object and wish to bind together practitioners of every class in the great work of veterinary improvement. We have received many valuable communications, and are promised more from those who stand highest in our profession; but every man can contribute something to the general stock of knowledge, and we solicit, and shall be grateful for, the assistance of all.—ED.

ritis was present, I did not let him have any more of it. There was a peculiarly anxious death-struck appearance from the time I first saw him. I took away about three quarts of blood from him. The blood was very dark and bubbly, and loose in texture. He reeled about, and, on giving him an oily drink, he fell down. I was obliged to leave him to attend another horse, and I saw him again in about two hours. I understood, at first, that he had only been ill a very little time before I was sent for; but, on going into the field where he was turned out, I found that he had rolled about at many places, and the ladies who drove him home in the evening before said that they found him different from what he usually was, and they found him particularly irritable, so that I think he had been bad all night. The pains did not seem to be very severe, and the extremities were not cold. Sometimes he lay down very still, and sometimes stood up for a while, and did not roll about very much at any time. The oily drink was repeated, and half an ounce of tincture of opium with it. Injections were given every two hours. The bowels were very much confined, and there was something like a hiccuping in the throat. He was now lying down, and, as I stood looking at him, I saw him bring up something of a very offensive smell, and mixed with the oil that had been given. He got up and stood with his head over the manger, and kept throwing up every few minutes, sometimes only a very little, at others a pint or more, through the nostrils, and in this way he kept on until a few hours of his death. Large injections were thrown up, but he gradually seemed to be worse. I was quite at a loss to know what more to do. I have seen many horses with inflamed bowels, and, though I was satisfied there were inflamed bowels here, I thought it was complicated with something else. The horse staled freely, and the pulse was about eighty. I was of opinion that the complaint, whatever it was, was very near the pyloric orifice of the stomach, but whether there was any lesion or strangulation, or stone in the passage, I could not tell. I gave it, however, as my opinion, that something of that sort had taken place. He became worse and worse, and died in about twenty-four hours after I first saw him. Just before he died he walked out of the stable, and was found standing in the pond, and I think he drank some water, as there was a considerable deal found in the stomach after death, otherwise he had not eaten or drank any thing after he had been taken ill.

On opening him, about six yards of the small intestines, from the pyloric orifice, did not seem to be affected; then, for five yards and a half, the gut was completely filled with coagulated blood of a dark colour. The parts of the bowels behind the stoppage

seemed to be all right. There was no food in the stomach, but it was moderately distended with water*.

ON THE CONSTITUTION OF THE VETERINARY COLLEGE.

To the Editor of The Veterinarian.

SIR,

THAT the veterinary profession in this country is in a neglected and degraded state, no one at all conversant with it will deny; that the constitution of the Veterinary College has been the sole cause of this, will be equally manifest; and that so long as the institution be suffered to remain in its present organization, no change for the better can take place; and it is equally clear, that the professor and his assistant will endeavour to keep the monopoly they possess for their own pecuniary benefit.

It is but natural for every man to take care of his own interest in preference to that of others; and had the governors of the Veterinary College, who framed its laws, had the wisdom to consider this, they would, in placing a profession so much in the power of one man, have identified his interest with its welfare.

Surely Mr. Coleman cannot now be blamed for taking the fees of as many people as choose to present themselves, with their twenty guineas, as pupils. Indeed, I much doubt if Mr. Coleman can, constituted as the college is, prevent any chimney-sweep from becoming a pupil, who may possess the means of entering this "refuge for the destitute." If there were laws existing to prevent ignorant men from becoming pupils, and obtaining

* We reply to Mr. Leaver's questions. This seems to have been a case of inflammation of the mucous membrane of the small intestines, accompanied by a morbid irritability of the whole intestinal canal. It is not unusual for the inflammatory appearances to be confined to particular patches or portions of the ileum, and particularly its lower portion. The coagulated blood proceeded not from the rupture of any particular vessel, but the increased action of the minute vessels which open on the mucous membrane of the intestines.

The second horse died of epidemic catarrh, but we demur to the infectious nature of the complaint.

As to the stone colt, we can only say, avoid the exciting causes of the disease. Do not feed too highly. Let the stable be properly ventilated and cool; and if medicine *must* be given, let it be digitalis, nitre, and emetic tartar, made into a ball with tar, and that occasionally, or when the cough is present.

the diploma of veterinary surgeons, and Mr. Coleman had neglected to enforce those laws, then the profession would have just cause to inveigh against the admittance of such a motley tribe as usually form the college circle of pupils—men who can scarcely pen their own name; and how can it be otherwise, when mutton-pie men, ratcatchers, razor-strap makers, and blacksmiths, are suffered to usurp the place of men of science?

Mr. Coleman cannot be acquitted of blame for encouraging a class of men to enter the veterinary profession, as he usually does in his introductory lecture, who are totally unfit for this station; yet we are none of us prepared to shew, that, legally, he has no right to do so: but that, in doing this, he should be suffered to deter men of education from pursuing veterinary science, is attributable only to the inefficiency of the laws that govern our national institution.

So long as the profession is made, by such laws, subservient to the interest of one man, so sure must it sink in the scale as it raises the beam in favour of individual gain.

In stating this, I do not allude particularly to the present professor; for when Mr. Sewell succeeds to Mr. Coleman, as he perhaps will, the same laws existing, the same feeling will probably prompt him to act as his predecessor did. Will the profession, then, be at all benefitted by the change? Certainly not; the evil exists in the ill-judged laws of the institution, and the professor has it not in his power to alter them, even if he had the inclination; nor is it likely that any radical alteration will ever be recommended by one, whose own interest must be so much opposed to it.

By the peremptory refusal of the examining committee to recommend to the governors the admittance of veterinary surgeons to their board, and thus to deny them the least presidency over their own interest, the profession must justly conclude that their only hopes can be centered in an appeal to the governors of the institution.

It is difficult to reconcile the motives that can have induced the examining committee thus to sacrifice the welfare of a laudable profession. But the governors of the institution are alone answerable for all the wrongs the profession has but too tamely borne: they alone have it in their power to reform our grievances; and if they would but use their own judgment, unswayed by interested individuals, the powerful voice of a whole profession would not be heard in vain.

The exercise of unjust influence has been suffered to commit such ravages upon the veterinary profession in this country, that will neither be easily effaced, nor ever can be wholly repaired.

The veterinary profession is a most important one, either viewed as tending to promote commerce or to increase agricultural interests; and England, so celebrated for superior horses and cattle, ought not to have an inferior veterinary institution; but, compared with those of France, and the principal continental institutions, ours sinks into just insignificance.

I remain, Sir, your obedient servant,

Pimlico, Nov. 17. W. J. G.

THE VETERINARIAN, DEC. 1, 1828.

" Licet omnibus, licet etiam mihi, dignitatem artis *veterinariæ* tueri."—*Cicero.*

PROFESSOR COLEMAN'S INTRODUCTORY LECTURE.

THE session of 1828-9 commenced at the Veterinary College on the 11th ult., and it commenced under circumstances favourable to the improvement of the pupil and the art. Two months' rustication had materially improved the appearance and health of the professor. The class was evidently numerous: many of the neighbouring practitioners, attracted by curiosity, or respect for their old instructor, were present, and the theatre was crowded to excess. There had, for many years, been points in Mr. Coleman's introductory lecture, to which his friends, and many of the profession, had listened with dissatisfaction and regret. We were much pleased to observe, that, although the professor did not *recant*, his opinions had undergone some modification, or, at least, his language was more guarded. We hail this as a prudent and candid concession to the general spirit and growing improvement of the profession. It is that which we sternly claim from the head of the college, which we expect from Mr. Coleman's ability and penetration, and which we shall be the first to mark and to applaud.

There used to be a tirade against comparative anatomy, neither the meaning nor the object of which could we ever understand,

although we witnessed with pain its evident effect. The professor was wont to say, and with much energy, that he disliked comparative anatomy, for its mischief was, that it led to comparative physiology and comparative pathology.

When the student heard this, *ex cathedrâ*, he considered himself as restricted to the examination of the structure and physiology of the horse. There was danger, nay, certain evil, in wandering beyond him; and the consequence was, that the horse alone occupied his attention: and of the structure and functions of the most important organs of his other, and, "take them for all in all," his most valuable patients, he was strangely and utterly ignorant. He was perfectly satisfied with, he almost applauded, the limited system of instruction to which he was accustomed to listen. The horse was his only study, and he neither wished nor dared to extend his researches. We will not say that this was the designed effect, but we know that it was the real effect of the professor's anathema against comparative anatomy.

In the present lecture, Mr. Coleman "found fault" with comparative anatomy, but his language was more carefully selected. His arguments were levelled, or might be construed as being levelled, a little more against the abuse of comparative anatomy. It might dangerously mislead the enquirer. Where similarity of texture and structure and function appeared, the student might too hastily take it for granted, that there would be similarity of disease, and similarity of effect in the remedial means adopted. Experience was the only basis on which veterinary pathology could be built, and experience discovered the most unexpected and inexplicable difference in the diseases to which the same organs were exposed, and the effect of certain medicines.

To this we object not, except that the professor should have plainly said that it was the abuse of the thing to which he objected, and not to have left it probable that his pupils would consider him as hostile to the study of comparative anatomy, while on *former* occasions it was impossible for them to arrive at any other conclusion.

If the veterinary surgeon would practise his art in all its branches, and extend his medical assistance to all those whom the founders of the college declared to be his patients, he must be

a comparative anatomist. He must be acquainted with the structure of the horse, the ox, the sheep, the swine, and the dog.

If we select the stomach of these animals, so different in structure and in susceptibility to medical agency, what beautiful illustrations of comparative anatomy do we possess, and what unanswerable proofs of the propriety of the professor's most important doctrine, that our practice must be founded on careful experience, and not deduced from analogical inference.

We beg leave to assure the veterinary pupil, that the most diligent study of the structure of all his patients is an imperative duty. The consideration of the difference of structure in different parts, and the difference of function depending on that difference of structure, and the structure and function suited to the situation and wants of the animal, will unfold to him the most pleasing and sublime views of the design and adaptations of infinite power and wisdom and goodness; and, to adopt the language of an excellent writer (Mr. Lawrence), "the basis of our physiological principles will be rendered broader and deeper, in proportion as our survey of living beings is more extensive. The varieties of organization supply, in the investigation of each function, the most important aids of analogy, comparison, contrast, and various combination, and the nature of the process receives at each step fresh elucidation. These enlarged views, which unfold to us the natural play of the animal mechanism, are our surest guide in the study of its deranged motions, an essential criterion for estimating the nature and the degree of the deviation, and an important indication of the means by which it may be corrected. Thus general anatomy and physiology furnish the principles by which we are guided in our attempts to preserve health, to alleviate and remove disorder, and cure disease."

There was another subject on which Mr. Coleman used to descant in his introductory lecture, viz. the comparative success, in the veterinary profession, of those who had been previously medically educated, and the sons of farriers. The sons of farriers, he used to say, make the best practitioners, and medical men the worst.

We always regarded this comparison as perfectly uncalled for. When the professor was for the first time addressing his pupils, and th[e] mpression which he made on their minds was probably

indelible, why should he damp the ardour of a single individual? Why should he lacerate the feelings of a well-educated and susceptible young man?

From some view of family connexion, or certainly from a conception of the respectability of our art, the medical student has been induced to quit his former pursuits, and to rank himself among us. The die is cast: he is gone too far to retract: his heart is full of good resolutions and ardent hopes; when, suddenly, "comes a frost—a killing frost." He is told, from the highest authority, that he probably will not succeed, and that the farrier's son will be the better man. Surely this is uncalled for and cruel.

What good object could this gratuitous condemnation effect, or how will the professor answer for those whose prospects he may have untimely blighted? We know full well, that, when a young man is taught to believe that he must make the worst practitioner, he will not fatigue himself in endeavouring to become the best.

We will not say that it was the intention of the lecturer to frighten from the profession the man of education, and to confine the practice of our art to those who, previously to their admission into the college, possessed no scientific principles, and, at the college, had no time to acquire them; but the evident effect of this gratuitous and absurd comparison is, to flatter the vanity and encourage the idleness of the one, and check the ardour and mar the prospects of the other.

In the present introductory lecture, however, the professor did not as formerly, and almost without preface, denounce the incompetency of the medical student; but he began by very properly considering the different situations whence the veterinary students probably came, and the corresponding advantages or disadvantages under which they possessed. He spoke first of the medical student, and of the advantages he enjoyed?—no, not so, for he would scarcely acknowledge him to have any; but he spoke of the previous direction of his studies, the employment of his time, and the habits he had formed. Here we should heartily coincide with him. "You, gentlemen," we should say with him, "notwithstanding your medical acquirements, have much to do. "You have to forget many of your former associations and associates. You have honestly and thoroughly to do that for which

"your very education may possibly have indisposed you. You "have to study, and live with, the horse. You are to learn, that "most difficult of all things, to be *horsemen*. You are to make "yourselves perfectly masters of every process, every manipula- "tion and operation. White fingers and well-rounded nails become "not a veterinary surgeon. And, worst of all, you must to a "certain degree become the companions and the confidants of "those who are about the horse. In the present degraded state "of our profession, you will almost daily meet with something to "annoy you. If you cannot reconcile yourselves to this, you had "better retire ere it be too late. You may, however, be assured, "that the union of science and adroitness, and gentlemanly con- "duct, will in due time command the respect of the groom, the "confidence of the master, and the esteem of the public."

Then, if he had turned to the "farriers' sons," and said, "You, "gentlemen, who have assisted in the practice of your fathers' "forge, bring with you very important knowledge of the symp- "toms of many diseases: you have now to learn the principles "on which all good practice must be founded. You will have to "discard many an erroneous and pernicious opinion, founded on "ignorance, and handed down from father to son. Diligently "study the anatomy of your patients, the real functions of the "different organs, the causes of disease, and the true indications "of cure. Remember, that while science is rapidly spreading "through every rank of society, more will be expected from the "veterinary surgeon than from the mere farrier's son; and see to "it, that you bring no disgrace on the honourable title which, in "due time, you will be permitted to assume."

Had our lecturer adopted a course of admonition, resembling, and, coming from him, far, far superior to that which we have feebly traced, we should have applauded him to the very echo; but no sooner does he give a little excellent advice to the medical pupil, than, seduced by the power of habit, he unnecessarily and cruelly tells him that the chances are very much against him:—he sneers at his dislike or inability to take up or properly examine the horse's foot;—and completes the whole by declaring how numerous are the instances in which veterinarians, medically educated, have retired from the profession in disgust.

We could have partly forgiven even this, had any thing like equal justice been rendered; but when the professor turns to the other class of his pupils, he recommends them, indeed, to attend closely to their anatomy, and to avail themselves of every opportunity of post-mortem examination, and carefully to compare the appearance after death with the symptoms during life. This is most excellent! but he adds, "do this, gentlemen, and you will find no difficulty; for the diseases of the horse are few, and easily understood."

To the assertion that the diseases of the horse are few, we should most seriously demur. We will ask, whether there be a viscus or a membrane, which does not occasionally, in our post-mortem examinations, give indication of previous disease. The truth of the matter is, that we have not sufficiently attended to, and distinguished and classed, the symptoms of quadruped disease.—But, probably, of this hereafter.

We cannot really see the propriety of this marked attack on the medical, and deference to the uneducated pupil. Its obvious, although not designed effect, is to discourage and drive away the very ornaments of our profession.

The professor says, that long habit has enabled him pretty confidently to tell who will and who will not succeed, and medical students make the worst practitioners. Let us examine his proscribed list. First stands the name of Coleman, thirty years professor of the college. Shall we stop here, or farther explore the absurdity of this matter? Coleman, the present professor;—Moorcroft, the joint professor with Mr. Coleman at the establishment of the college, and now at the head of our profession in India;—Peall, the late professor of the Dublin College;—Blaine, for many a year the only anatomical teacher we had;—Bracy Clark;—W. Percivall;—the Goodwins, father and son. Where will the veterinary world produce a constellation of talent comparable to this? The acknowledged heads of the profession in Great Britain, Ireland, and India,—the authors of the best, and almost the only, valuable treatises on the veterinary art, were not only very bad, but the worst practitioners. Then, fy on those who placed them in these posts of honour, and surrounded them with this false reputation.

The worst practitioners! the most unskilful! mere botchers and bunglers, who know not the symptoms of disease, or the application of remedies! If words have meaning, this is the construction. When Mr. Coleman has erased—which he would not if he could—these names from the short but valued list of veterinary worth, we will allow the truth of his position; but, until that, we can only consider it as one of the strange and unaccountable aberrations of eminent men.

But the medically educated veterinarian often relinquishes his profession,—and so does the veterinarian, from whatever class he comes. We are acquainted with too many, who, with all the previous drilling which Mr. Coleman represents as so important, have utterly failed, or else have been compelled to mingle other avocations with the practice of the veterinary art, in order to obtain a livelihood.

The medically educated veterinarian is sometimes driven in disgust from his profession. What drives him from it? The low estimation in which the veterinary surgeon is often held; the omnipotence of the coachman and the groom, who will place confidence in none far removed from their own grade, or who will not mingle with them in their debauchery, or satisfy their cupidity: and last, and not least, this incautious and indefensible comparison of Mr. Coleman, which is spread throughout the country, the quode of the groom, the boast of the farrier, the support of ignorance, and the bane of respectability.

Two students were conversing together as we quitted the college after the introductory lecture. "Our professor gave it to the surgeons just now prettily, didn't he?" said one. "Aye, that he did," replied the other; "'twill lower 'em a bit." Such is the feeling,—such the party spirit, which must inevitably result from comparisons like these; and when there is a line of demarcation traced, and yearly widened and blackened, between the scientific and uneducated practitioner, and the head of the profession *goes out of his way* to advocate the cause of the latter, there needs no ghost to tell us what will become of the improvement and respectability of the profession.

After all, however, the introductory lecture of this year was not, by a great deal, so objectionable on this point as it used to be;

and therefore we encourage the hope that the professor is beginning to doubt the truth of that opinion which he so long and strenuously and mischievously promulgated, and that he will shortly candidly and manfully retrace his steps, or, at least, will no longer publicly and unnecessarily force this obnoxious comparison, which is reprobated by every enlightened, liberal, and honourable practitioner, and which will not and cannot come to good.

From this alteration, if not of opinion, yet of language and manner, we augur well; and we have the happiness to say, that Mr. Coleman continues frequently to take his clinical round,—that his observations on the diseases which occur are most instructive,—that he is perfectly accessible,—that he encourages the interrogatories of the youngest student,—and has evident pleasure in communicating important knowledge.

The dissecting rooms are much improved, and, in reply to the inquiry of one of the pupils, Mr. Coleman promised, at the close of his introductory lecture, that the demonstrator or assistant demonstrator should be daily in the dissecting room from ten until four o'clock, if required by any of the students who were honestly and regularly dissecting.

We therefore repeat, that this session has commenced under auspices favourable to the improvement of the pupil and the art. A feeling of propriety, and a sense of interest, will induce the heads of the college not to disappoint the expectations they have raised; and, should the work of improvement be evidently and systematically carried on, we, and the profession generally, would rejoice and applaud.

The adoption of a system of gradual, salutary, and effectual reform,—the disposition to *concede* that which, by and bye, we should *extort*,—these alone are wanting to unite every honourable and influential practitioner in the support and defence of our national school.

Miscellanea.

HORSE CAUSE.

J. T. EDMONDS *v.* DOBSON.

Mr. Serjeant Wilde stated, that this was an action brought to recover a sum of £80, on the breach of a warranty of a horse. The plaintiff was a surgeon, living in Argyle-street, and the defendant had been a Quartermaster in the 1st Regiment of Horse Guards, but had now quitted that regiment. The plaintiff had purchased the horse in question under a warranty of soundness; but afterwards finding that there was an enlargement of the bones of the foot, the horse was sent to the Veterinary College, and, on Mr. Sewell's opinion that it was unsound, it was returned.

Mr. Pyle.—I am a clerk in the house of Messrs. Cox and Greenwood, who are agents for the defendant: this paper is in his hand-writing; the paper is dated 15th May, 1828, and warranted the horse in question, a brown gelding, sound and quiet.

James Franks.—I am in the service of the plaintiff; I remember the horse that my master bought of the defendant; I saw it first in Argyle-street, and afterwards saw it at the defendant's stables at the barracks. I saw the defendant; he asked me what the plaintiff said about the horse, and what the gentlemen at the college said about it. I said, that they had told him he need not have sent it there on account of its broken knees, for anybody could see they were broken.

Cross-examined.—I never said that my master had twenty horses in a month.

Mr. Sewell.—I examined this horse on the 16th of May; it was unsound, in consequence of an ossification of the cartilages of the heel. I found no other unsoundness to complain of: it had what farriers call false ringbones. That renders a horse decidedly unsound. The conversion of the cartilage into bone constitutes unsoundness: that unsoundness is generally of very gradual growth, but it may have been occasioned by some very powerful exertion within a short time. The horse's knees were broken.

By the *Chief Justice.*—The animal is never afterwards a sound horse: over exertion will produce inflammation, and, when that subsides, it becomes bone.

Mr. John Lythe (of the Horse-Bazaar), a veterinary surgeon, confirmed the evidence of Mr. Sewell: he had seen the horse only this morning.

This was the plaintiff's case.

Mr. Sergeant *Storks* (who was assisted by Mr. *Hutchinson*) said, that the plaintiff, who was a surgeon-dentist in Argyle-street, would feel himself much disappointed if the Jury were not told that he prided himself much in his judgment on a horse. The defendant had been a quartermaster in the 1st Regiment of Life Guards, and, after thirty-six years' service, had retired with honour from the regiment, in order to enjoy himself in peace and quiet, and without having, by any conduct of his, rendered himself liable to the imputation of having endeavoured by a trick to pass off an unsound horse on the plaintiff. The truth was, that men who thought themselves very skillful in horses were very capricious in their taste; they were like children with playthings —they get tired of them; and then, as if they could not get rid of them as easily as children did of playthings, they had recourse to courts of justice, and subjected quiet men to the trouble of a law-suit. The Jury had heard the evidence of Mr. Sewell, which had been given in the way that might be expected in this march of intellect age; but had it established such a case of unsoundness as would entitle the plaintiff to a verdict? The horse was a very fine animal, and the plaintiff had been struck by its beautiful appearance, and had therefore purchased it; and now wished to get rid of it, because he found a small blemish on one of the knees, which did a little impair the beauty of that appearance which had at first taken his fancy. It could not be pretended that the blemish on the knee was an unsoundness; indeed, it had not been put forward as one; and with regard to the other, it would be shewn clearly that it was not an unsoundness. The Jury had heard the evidence of a veterinary surgeon, but, to meet that, other persons, whose experience was perhaps greater, though their science might not be so great, as these respectable persons from universities, in this age of universities, and who would tell them that the horse really was not unsound. From these witnesses they would hear, that a horse might have a temporary enlargement of the hoof without being unsound; and it would besides be proved, that this horse was, even at this moment, in a sound state.

Mr. W. Percivall.—I am veterinary surgeon to the 1st Life Guards; I have been so for the last eighteen months: I have during this period known the horse in question, but it was never before brought under my *particular* observation. I examined it a few days after it had been returned by the plaintiff; in my opinion the horse was perfectly sound. I made a second examination a few days afterwards, as I understood it was to be made the subject of a trial. I examined its feet; it had some thickening; I don't deny but that it was an ossification of the cartilage. Ossification, unless the horse is *lame* in consequence of it, does

not, in my opinion, constitute unsoundness.—In answer to a question from the Lord Chief Justice, he said, that when the cartilages were ossified, a horse could trot with the same facility as before. On the question being repeated, he said with the same *apparent* facility—" I can only judge," said he, " of the action of the animal from what I see." Such a horse could go through the same labour as before, and in the same time, and with the same degree of safety. This did not necessarily constitute the *beginning* of disease ; it might have been the termination of the disease, for aught he knew, and might not go any further ; if it did not, unless it produced lameness, it was no unsoundness.

Thomas Perry.—I am the assistant to the last witness: I know this horse ; I had known it for three years ; I had seen it every week, and almost every day. It is not my duty to inspect horses with regard to soundness, but, if there is any lameness, it is brought to me, and I make my report to my master. I have held my situation ten years : the horse has always been used by the defendant ; it always went through its work well : he is a heavy man ; he is about sixteen stone. To my knowledge the horse was not unsound, but it certainly was not lame.

Mr. Coleman.—I am the professor at the Veterinary College : I have examined the horse now, and I believe I saw it in the month of May last ; there was then an enlargement and deposition of bony matter on the cartilages ; it had also broken knees, but that is not an unsoundness. I saw it trot on soft and on hard ground, and it was not in the least lame. Unsoundness is a very ambiguous term, on which few persons are agreed ; my definition of it is this—*whenever there is alteration of structure and function in a part, and that altered function interferes with the duty of the whole, I consider the animal as unsound.* In this case, although it was not actually lame, yet the seeds of the disease existing at that moment, if it should go on and end in lameness, I should say it was unsound when I saw it ; it was then in existence, and the disease had produced effects. It is the same with a splint ; in the majority of such cases, I should say it would not end in lameness : my opinion then was, that he was at that time sound, but if, by labour, it should increase, that would be unsoundness.

Charles Fielder.—I keep the yard at the Rose and Crown, Knightsbridge : the horse has been in my stable since the 16th of last May ; I have regularly exercised it up to this time, and I have never found it go lame. I rode it here to-day, and I did not perceive that it had any lameness.

Mr. Sergeant Wilde, in reply, told the jury that there were many cases in which the best thing they could do was to exercise

their own common sense, and he called on them to do so in this instance, and to say whether they could believe that they should be equally sound as they were now, if an ossification of the cartilages of their legs should take place. If they thought not, their verdict must be for the plaintiff.

Mr. Coleman was recalled by the Chief Justice, and said that the horse could not, in the month of May, have gone through the same degree of exercise with the same ease as he would have done, if there had been no ossification of the cartilage; and, moreover, that as its present soundness was probably owing to continued rest, should the animal be put even to ordinary work, in his opinion, it would become lame, and consequently unsound.

The *Chief Justice* told the Jury, that in his opinion, Mr. Coleman's evidence had put the defence out of court. Their common sense, to which an appeal had very properly been made, would teach them that an ossification of the cartilage could not be beneficial; for if bone would be better where cartilage now was, their experience of the wisdom of Providence would induce them to believe that bone would have been placed there originally, and that the alteration of the structure of our frame, or of that of animals, could not be made with advantage. If they believed that the enlargement of the foot and the ossification of the cartilage amounted, at the time of the sale, to an unsoundness, they would find for the plaintiff.

The Jury, without hesitation, returned a verdict for the plaintiff—Damages, Eighty Pounds.

Remarks on the foregoing Case.

As horsemen, we meet with no legal trials from the perusal of which we are apt to rise with so much surprise, dissatisfaction, and even disgust, as what are called "horse causes." The gentlemen of the law, and for the most part the jury, are probably less informed on medical than on most other sciences. In a general way, judges, counsellors, and attorneys, know as little about medicine, as physicians or surgeons, or veterinary surgeons, do about law; but, unfortunately, the former are daily occupied in concerns in which it becomes an imperative duty for them, not only to make it *appear* that they possess a knowledge of discriminating between right and wrong in medical affairs, but to *act*, and *decide*, with that appearance of knowledge. On these occasions, it is to the lamentable medical deficiencies in the court that we

must impute the apparent unreasonableness of the verdict which we so frequently meet with in the cases regarding the soundness of horses. Though the principal, this is not the sole difficulty which presents itself in a horse-cause: along with medical knowledge should be combined, at least, an ordinary insight into the nature, treatment, and uses of horses, in order to direct the mind to a safe and just conclusion. The manifest want of such knowledge, forms, it is most true, but a speck upon the phase of the moon, as contrasted with the splendid light of truth and justice reflected from every part of that master-piece of human institutions—a British court of judicature; still, were there a law-court possessed of such a knowledge, there cannot arise a question about the advantages that must accrue from it.

The case before us appears to be of the class of those whose unfortunate issue may be (without casting any reflection whatever on the jury or gentlemen of the law) ascribable to want of closer and more enlarged acquaintance with the subject on which they had to arbitrate. It is true that they collected much information from the evidence; but it was this very knowledge, fresh acquired as it was, which became in their hands an instrument of terror, inasmuch as they possessed not the discrimination how to use it. The facts of the case, bearing on the question at issue, are briefly these:—

On the 15th of May, Dobson sells his horse to Edmonds for £80; next day, Edmonds sends the horse to the Veterinary College for examination, whence he is brought back with a certificate from Mr. Sewell, that he has enlargement and ossification of the cartilage of the foot, and is consequently unsound. The same day he is returned to Dobson, who refuses to take him back: the result of which is, that the animal is placed at livery (in nobody's name) in Knightsbridge. The next day, Dobson shows the horse to Mr. Percivall, who pronounces him to be sound. The day after, Edmonds arrests Dobson for £80. Dobson finds bail. Edmonds then brings his action for the recovery of the £80. In the interval, the horse is sent a second time to the Veterinary College, and on this occasion is shown (not to Mr. Sewell, but) to Mr. Coleman, who returns a written certificate to say, that *he sees no* CAUSE *of unsoundness* in the animal. The day of the trial (Nov. 19th) the horse is examined (for the plaintiff) by Mr. Lythe, who finds ossification of the cartilage, and (with Mr. Sewell) considers such to be an unsoundness. Perry affirms that the horse was never known to be lame in the regiment (in which he had served for three years, and up to the moment of sale); and Fielder assures the court that the animal

(which he has exercised every day for six months) never, to his knowledge, evinced any signs of lameness.

Mr. Coleman's evidence, to which the Chief Justice in particular lent his ear, and on which, it will be seen, the issue of the case turned, amounted to this :—In May, the Professor, in writing, declares that the horse *shows no* CAUSE *of unsoundness*. In November following (not having examined the horse in the interval), he repeats that the horse was not in the least lame in May; but adds, that *at that time* he could not have gone through the same exertions with the same ease as he would have done without such ossification; and that, if put to ordinary work, he would become lame.

We do not perfectly understand this. Did Mr. Coleman not observe the ossification of the cartilage in May, or did he afterwards alter his opinion as to the compatibility of that ossification with actual soundness? If, in Mr. Coleman's *then* opinion, the ossification in May constituted no cause of unsoundness, was there not additional reason to adhere to the same opinion, when six months had passed, and the horse, although not at full work, had been daily exercised, and had not been for a moment lame, and was not lame at the time of trial?

To the logical decision of the Judge, that "if the animal was, at the time of sale, incapable of that which he was equal to in a state of perfection, and that, if the seeds of disease then existed in his foot, the defence was put out of court," we do not object; but we confess that we are not altogether satisfied with the manner in which the trial was conducted, nor with its termination; and we take leave of this strange case, by submitting to our readers a query or two of some importance :—

1st. What constitutes unsoundness?

2d. Can a horse, which is by no one said to be lame, be pronounced to be unsound? (in action?)

3d. Does the conversion of cartilage into bone, or any other altered structure (concerned in action), constitute unsoundness, unless lameness is actually present?

4th. Can a horse be considered as sound or unsound, in reference either to what is past or *what is to come?*

VETERINARY MEDICAL SOCIETY, Nov. 12.

Mr. J. Field, Jun. *in the Chair.*

MR. W. GOODWIN read a paper on the different modes of castration, which we have the pleasure of inserting in this number. It produced a desultory, but very useful discussion. The opinion of the majority of the meeting was in favour of the clams; but the uncovered way was accounted the simplest, and the least painful and dangerous. One gentleman alone spoke in favour of the old operation with the cautery.

The caustic was supposed materially to expedite the effect of the clams, and the testicles were generally left until they spontaneously separated.

Few of the gentlemen present could be brought to approve of the continental mode, of considerable, or even severe, exercise, after the operation.

The division of the vas deferens, as a substitute for castration, was discussed, and several gentlemen promised to institute experiments on the subject. Mr. Mayo related a case in which the vas deferens did not reach the urethra, but was reflected back on the testes; yet there seemed to be no deficiency of generative power. The modes of castrating other animals were spoken of: the tearing of the spermatic vessels in the bull by English, and the twisting of them by continental, surgeons. Castration in the lamb, by tearing the cord, and in the ram by the cautery, and the uniform use of the ligature in the dog.

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